



Economic Profile of the Bureau of Land Management, Ukiah District

By: Jackelyn Lundy

Bureau of Land Management - California



BLM Library
Denver Federal Center
Bldg. 50, OC-521
P.O. Box 25047
Denver, CO 80225

Resources Development Internship Program
Western Interstate Commission for Higher Education

HC
107
.C2
L85

This report has been catalogued by the WICHE Library as follows:

Lundy, Jackelyn

Economic profile of the Bureau of Land Management, Ukiah District / by Jackelyn Lundy. -- Boulder, CO : Western Interstate Commission for Higher Education, 1975.

72p.

1. Land. 2. Natural resources. I. U.S. Bureau of Land Management. II. Western Inter-

state Commission for Higher Education. Resources Development Internship Program. III. Title.

**Bureau of Land Management
Library
Denver Service Center**

The ideas and opinions expressed in this report are those of the author. They do not necessarily reflect the views of the WICHE Commissioners or WICHE staff.

The Resources Development Internship Program has been financed during 1975 by grants from the Economic Development Administration, the Jessie Smith Noyes Foundation, the National Endowment for the Humanities, the Wyoming Office of Manpower Planning; and by more than one hundred and fifty community agencies throughout the West.

WICHE is an Equal Opportunity Employer.

#2742623

ID: 88001308

HC
107
.C2
L85

ECONOMIC PROFILE OF THE BUREAU OF
LAND MANAGEMENT, UKIAH DISTRICT

by Jackelyn Lundy

Local Sponsor: Bureau of Land Management

Project Committee Members;

Dale Bays

Bob Saunders

Bureau of Land Management
Library
Denver Service Center

BUREAU OF LAND MANAGEMENT LIBRARY
Denver, Colorado



88001308

Table of Contents

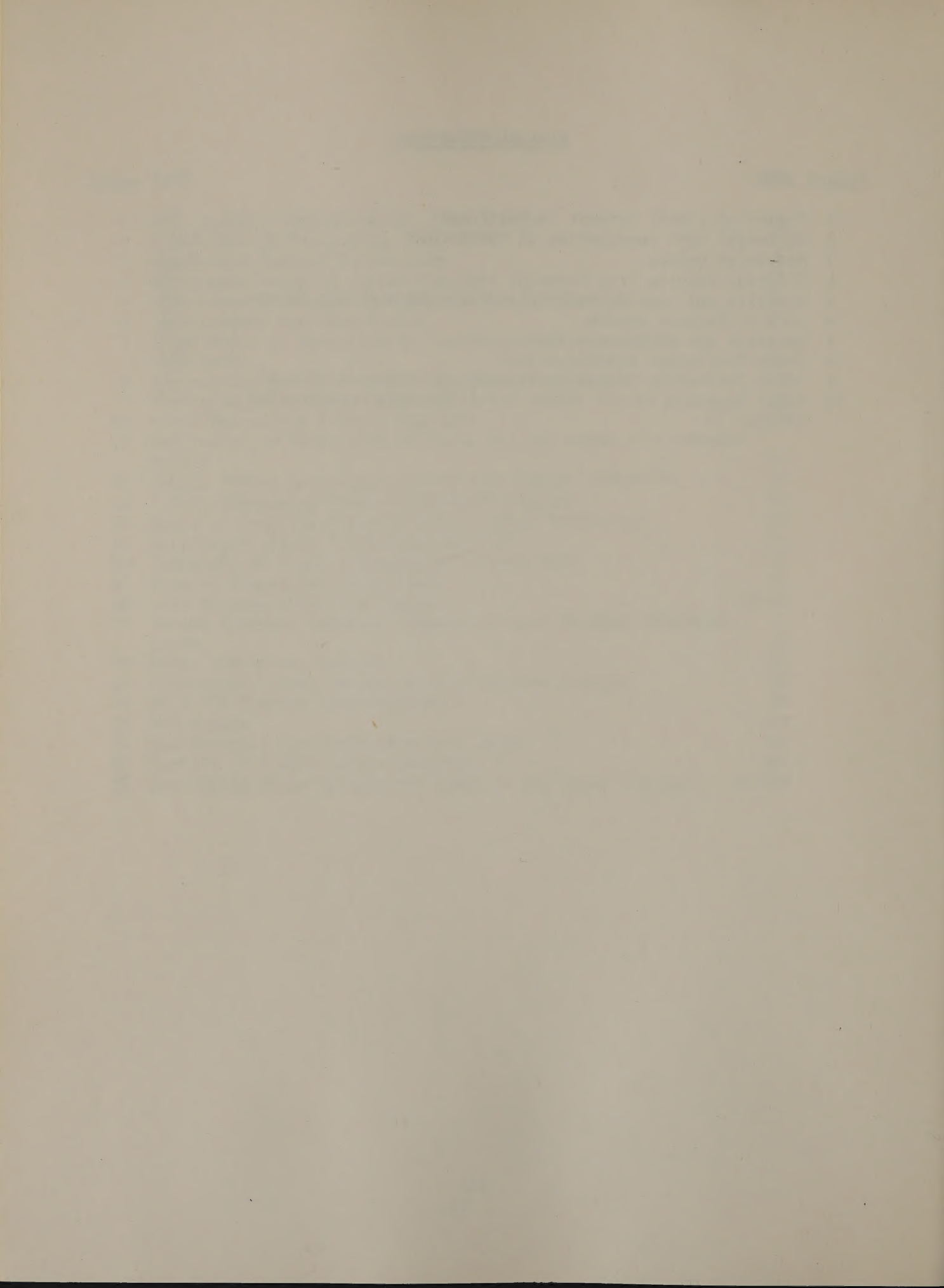
	<u>Page</u>
Abstract	1
Napa County	2
Sonoma County	7
Lake County	14
Mendocino County	20
Humboldt County	26
Forest Products Sector	32
Geothermal Development	50
Recreation	62
Data Source Indexes	69-72

List of Tables

<u>Table</u>	<u>Page</u>
1 Soil Quality Classification, Napa County	4
2 Sonoma County Population, 1930-1970	7
3 Population Density Projections	9
4 Employment Group in Sonoma County	11
5 Population Increases for Lake County and the U.S.	14
6 Unemployment for Lake County	15
7 Gross Value of Agricultural Production for Lake County 1963-1974	16
8 Agriculture Preserve Status for Mendocino County	22
9 Mendocino County Land Ownership	24
10 Mendocino County 1972-73 Tax Roll	25
11 Employment of Population 16 Years Old and Older for Humboldt County	27
12 Annual Timber Production in Humboldt County 1950-1970	28
13 Future Recreation Needs in Humboldt County	30
14 Value of Humboldt County's Agricultural Production	30
15 California Timber Production for 1973	35
16 Ownership of Private Commercial Forest Land	35
17 Area of Commercial Forest Land	39
18 Area by Land Class and County	42-43
19 Forest Products Industry Dependence Upon National Resource Lands	49
20 Major BLM Sales, 1970-75	50
21 Geothermal Energy Estimates from Various Sources	52
22 PG & E's Current Load Forecast	56
23 BLM Leases	60
24 Tax Revenues Generated from BLM Leases	61
25 Summary of Public Lands Ownership	64
26 California State Recreation Areas in the Ukiah District	67-68

List of Figures

<u>Figure</u>	<u>Page</u>
1 Projected timber harvest in California	33
2 Estimated wood consumption in California	34
3 Sawtimber volume	37
4 Shipping Exports from Humboldt Bay	45
5 Sawmills and Logging by area and size in Humboldt County	46
6 PG & E Electric System	51
7 Location Map of Geysers Area	53
8 Known Geothermal Resources Area	54
9 Local Employment Resulting from Construction of Unit 13	58
10 Local Wage and Salary Income Resulting from Construction of Unit 13	59



Abstract

The purpose of this report was to prepare an economic profile of the Bureau of Land Management's Ukiah District. The Ukiah District is comprised of eleven northwest counties in California. These counties are Marin, Sonoma, Napa, Solano, Yolo, Colusa, Lake, Mendocino, Humboldt, Del Norte, and a corner of Trinity. However, because of a very restrictive time constraint and because of the minor role BLM plays in the economies of five counties, the scope of this report will just cover Napa, Sonoma, Lake, Mendocino, and Humboldt. Only those sectors of the local economy which are pertinent to BLM land holdings are discussed in detail thus, forest products, geothermal development, and recreation are given much more attention than other sectors such as seafood processing.

A very generalized conclusion can be drawn about the reliance of local economies of the Ukiah District on their natural resource sectors. This conclusion finds that the further removed the counties are from the San Francisco Bay Area economy, the more the local economy depends on its natural resources. Because there are not any major manufacturing centers north of the San Francisco Bay area or in southern Oregon, the exploitation of the natural resource sectors and the growth of the service sector contribute a major proportion to those counties with a minimum amount of income from other sources.

The demand for different uses of the national resource lands varies greatly within the District. With the increasing populations in the southern counties of the District, the demand for more open space and recreation areas is also increasing. The need for new alternative energy sources has created an increasing demand for the development of new, potential geothermal areas. The timber industry is quickly approaching a critical point where they will have to look to other private and public timber growths to help maintain their industry. The Bureau of Land Management has the opportunity to participate in meeting these growing demands. However, because of the nature of these demands, they are, in most cases, mutually exclusive thus creating the need for very careful multi-use planning of the available public lands.

In reading or using this report as a source, it is of utmost importance that the reader takes into account the very restrictive time constraint which resulted in the report taking broad sweeps at very complex subjects. This report gives a summary of some very specific areas within the Ukiah District but is by no means a complete economic profile of the entire District. Thus, for a more complete understanding of the District and its economy, much more research is needed.

NAPA COUNTY

Napa County is located northeast of San Francisco Bay, about 45 miles from the Pacific Ocean. Its county seat, the City of Napa, is about the same distance (45 Miles) from San Francisco. It has a total area of 793.75 square miles, consisting of a land area of 758 square miles and an area of 35.75 square miles covered by water.

Napa County is considered part of the nine-county "Bay Area" and the seven-county "Redwood Empire"¹ with the San Francisco-Oakland area serving as the basic trading area for Napa County.

By far the largest of the County's valleys, and the site of virtually all the populated communities in the County is Napa Valley. Napa Valley extends approximately 30 miles north of the city of Napa to Calistoga. The width of the Valley is about 5 miles on the south and then gradually narrows between the mountain ridges to about 1 mile in the vicinity of Calistoga. There are also a number of small valleys in the County.

The Berryessa Valley in the northeastern part of the County was about 10 miles long and 1.5 to 2 miles wide. In 1957 it was flooded by the Bureau of Reclamation with the construction of the Monticello Dam and now forms Lake Berryessa, which has become a popular boating and fishing recreation area.

Much of the County is in forest and woodland which covers a rugged terrain. More than half the County land is suitable only for limited grazing or forestry, at best. On the other hand, about 20 percent is classified as "fairly good" or better agricultural land.

Both urban and rural non-farm populations show substantial increases in Napa County with the urban rate of increase somewhat higher. Rural farm population shows a substantial decline with the 1960 level approximately half that of 1940. Napa's nationally known wine industry has greatly contributed in preserving the County's rural lands in that the value of land for vineyards has remained almost equal with the value of land for residential units. The number of new vineyards being planted, which are visible from the road ways, illustrates the land owners' confidence that the vineyard-residential land values will remain equal.

In manufacturing employment, the wineries of Napa Valley are just one of the leading group classes of products. The leading group classes of products are: steel products, building materials, clothing, leather

¹Bay area counties are San Francisco, San Mateo, Santa Clara, Alameda, Contra Costa, Solano, Napa, Sonoma, and Marin. Redwood Empire Counties are Marin, Sonoma, Napa, Lake, Mendocino, Humboldt, and Del Norte.

products, paper boxes, wine, brandy, champagne. There are 28 manufacturing plants in the community area.

Kaiser Steel Corporation, which is headquartered in Oakland, California, is the largest employer. Kaiser employs 1,556 people in Napa County to make steel fabrications; pipes, tanks, semi-finished steels, etc. The estimated annual payroll for the Napa County employees is \$14,500,000.¹

Kaiser Steel is affiliated through a common chairman, Edgar F. Kaiser, with Kaiser Aluminum and Chemical Corporation and Kaiser Cement and Gypsum Corporation. Mr. Kaiser is also a director of the Bank America Corporation. Kaiser Steel has one subsidiary, Kaiser Resources Ltd. Kaiser Steel is the tenth-largest integrated steel producer with its markets concentrated on the West Coast, where major competition from Japanese imports and the finishing facilities of U.S. Steel and Bethlehem Steel. Continued strength in the import market for metallurgical coal will boost the 1975 earnings contribution of Kaiser Resources, but the cyclical steel industry slump is likely to last throughout the remainder of the year.²

Basalt Rock Company, Inc., which is a subsidiary of the land development company Dillingham Corporation based in Hawaii, is operated out of Napa. Basalt Rock Company employs 360 people with an estimated \$6,000,000 payroll. The company produces building materials, pipe, block and light weight aggregate.³

Another major Napa based company is Rough Riders, Inc. They produce sportswear and employ 483 persons for an estimated \$4,000,000 payroll.⁴

Professional and related services industry make up a large portion of Napa County's economy. This fact along with the relatively fragmented small land holdings (in comparison with other land holders in the district) for residential and small farm operations has resulted in BLM having a minimal impact on the County's overall economy.

¹ Figures compiled by Napa Chamber of Commerce.

² O-T-C and Regional Exchange Stock Reports, Standard and Poor's Corporation, New York, 1975.

³ Figures compiled by Napa Chamber of Commerce

⁴ Ibid.

Table 1

Soil Quality Classification (Soil
Conservation Service Classes), Napa County

<u>Soil Class and Description</u>		<u>Napa County Acreage</u>	<u>Percent of Total</u>
I.	Very good. Level, little or no erosion	14,430	2.85
II.	Good. Use involves easily applied practices	28,650	5.67
III.	Moderately good. Needs intensive treatments	23,450	4.64
IV.	Fairly good. Best suited to pasture. Requires erosion protection	26,340	5.21
V.	Grazing or forestry - slight or no limitations.	0	0
VI.	Grazing or forestry - minor limitations, careful management.	56,710	11.22
VII.	Grazing or forestry - Major limitations	192,040	37.98
VIII.	Suitable only for wildlife and recreation	141,800	28.05
	Unclassified	22,180	4.38
	Total ¹	505,600	100.00

¹Includes land inundated by Lake Berryessa
Source: James M. Campbell, Economic Survey - Napa County, Master Plan Project, Part I (Napa, California, 1960), pp. 8 and 9, citing U.S. Soil Conservation Service, State of California, Department of Natural Resources.

NAPA COUNTY, CALIFORNIA

	<u>1950</u>	<u>1960</u>	<u>1970</u>	<u>January 1975</u>
Population in the County	46,603	65,890	79,140	87,100
Retail Sales Tax	40,422,000	67,166,000	127,523,000	223,354,000

Assessed valuation 1974-75 for County - \$310,241,985

Ratio of assessed value to appraised value: 25% of real cash value

County Receipts for 1972-73: 19,144,000. County Payments: \$17,776,000

Average tax per \$100 assessed value for 1973-74: \$9.20

Source: 1974 California Statistical Abstract, State of California

Napa-Vallejo SMSA Labor Market Area - December, 1974. Area includes

Solano and Napa Counties. Estimated area population, 249,081. Estimated total employment, 81,000.

3,200 Agriculture	13,500 Retail Trade
100 Agriculture Services	1,000 Wholesale Trade
2,400 Construction	2,100 Finance/Real Estate/ Insurance
8,600 Manufacturing	13,300 Services
4,000 Trans/Comm/Utilities	32,800 Government

MANUFACTURING EMPLOYMENT

<u>Name of Company</u>	<u>Employment</u>	<u>Products</u>	<u>Est. Annual Payroll</u>
Kaiser Steel Corp.	1,556	Integrated steel products	\$14,500,000
Basalt Rock Co.	360	Building materials, pipe	6,000,000
Rough Rider, Inc.	483	Sportswear	4,000,000
Wineries	475	Wine, brandy, champagne	4,328,000 ⁺
Sawyer Tanning Co.	175	Leather products	1,200,000

NON-MANUFACTURING EMPLOYMENT

<u>Name of Company</u>	<u>Employment</u>	<u>Products</u>	<u>Est. Annual Payroll</u>
Napa State Hospital	1,900	Mental Hospital	\$26,000,000
Napa Valley Unified School District	1,250	Education	11,000,000
Pacific Telephone and Telegraph	450	Utilities	5,800,000
Queen of the Valley Hospital	600	Community Hospital	3,900,000
Veterans Home	750	Hospital/Home	7,373,956
Silverado Country Club	280	Golf Course/Tennis Resort	Not Available

Source: Napa County Chamber of Commerce, Community Economic Profile.

SONOMA COUNTY

Like Napa County, Sonoma County is also located in both the Redwood Empire and Bay Area. Sonoma County is located about 40 miles north of San Francisco and has an area of 1,608 square miles. The county's terrain is composed of foothills and several broad valleys, the predominant one being the Santa Rosa Valley.

Santa Rosa is the major merchandising, medical, educational, and service center for the Redwood Empire Counties of Sonoma, Lake, Mendocino and part of Napa. The estimated population of the trading area is 300,000.

Sonoma County has been undergoing an influx of population which has created a trend in the conversion of rural farm lands to urban and non-farm rural residents. Sonoma County's population has more than tripled during 1930-70, but even so, the County's increase was less rapid than the state's increase.

The population of Sonoma, 1970, was about 204,885 people or almost 128 persons per square mile. This is about equal to the statewide average of 127 persons per square mile. However, it is less dense than Sonoma's neighbors to the east (Solano 212) and south (Marin 392) but more dense than its neighbors to the north (Mendocino 14), and east (Lake 15 and Napa 104)¹.

Table 2

Sonoma County Population, 1930-70²

	<u>1930</u>	<u>1940</u>	<u>1950</u>	<u>1960</u>	<u>1970</u>
Urban	18,881	23,146	34,076	66,124	120,305
Rural	43,341	45,906	69,329	81,161	84,580
Total	62,222	69,052	103,405	147,375	204,885
California	5,677,251	6,907,387	10,586,223	15,717,204	19,717,204
Sonoma/Calif.	.0110	.0100	.0098	.0094	.0103

In Sonoma County there appears to be a substantial immigration of population that is not primarily determined by the availability of jobs, but rather by the attraction of the county as a place to live. This is illustrated by the fact that the county has the highest percentage of the age group 65 and over (12.0 percent in 1970) of the nine Bay Area Counties. The fact that nearly one-fifth of personal income received by

¹Goldman, G., Wallace, L.T., Mamer, J. "Sonoma County Economic and Resource Use Study" University of California, Berkeley, 1973, pp. 5-6

²Ibid.

county residents comes from transfer payments (which are incomes received by people from government and private sources, but not related to the recipient's current employment) indicates that a substantial number of households in the county are partly or wholly supported by non-work related income sources. To meet the residential needs for the increased population, in 1973, approximately 33,000 acres of land was utilized for urban purposes in Sonoma County and 53,000 for rural residential development (one dwelling unit for 1-10 acres).

The increased population pressures on the land have created repercussions in the agriculture sector. Sonoma traditionally is an agricultural county. The good climate, soils and proximity to the Bay Area market have maintained agriculture as a major element in the Sonoma economy. However, population growth and increasing urbanization in the county over the last 20 years have reduced overall agricultural potential. Urbanization now covers much prime land that was once agriculturally productive. Other lands still in agricultural use are committed to urban development. In addition to this displacement of agriculture, urbanization has inflated adjacent agricultural property values and caused operational problems for farmers and ranchers. These problems, and other factors such as increased costs for feed, labor, fertilizer, and water quality standards have caused agriculture to be a comparatively marginal operation in many areas of the county.

Currently sales volume of agriculture in Sonoma County is more than \$123 million a year. Dairy products lead the sector, followed by fruit and nut crops, livestock and poultry, and eggs. The county is the leading producer of Gravenstein apples in the U.S. and second leading producer of prunes. The raising of grapes for wine production is now the fastest growing segment of the agricultural industry.

The absorption of agricultural acreage by rural residential development has been almost exclusively confined to areas where there is already a mixture of such development with agricultural activities and where the transition away from the latter is taking place. The most notable example, however, of such an area is in the apple production belt west of Sebastopol where further development may mean the eventual loss of an entire industry Unique to Sonoma County. Given the future projections for the population density, the ability for agriculturally productive land to remain economically viable is dubious.

In the industrial sector there are nearly 400 manufacturing plants in Sonoma County employing 8,000 workers and paying \$75 million in wages annually. Among the more important industries based on raw materials are lumber products; food products, including the processing of meat, poultry, small game, fruits, wines and brandies; and stone, clay, and glass products. Among the important light manufacturing plants are those producing metal products, shoes, optical products, scientific instruments, and electronic equipment. With the recent addition of the Microwave Division of Hewlett-Packard Company, the electronics sector should soon show a notable increase.

Table 3

Population Density Projections

<u>Region</u>	<u>Acreage</u>	<u>1970 Population</u>	<u>1970 People/Acre</u>	<u>2000 Population</u>	<u>1970-2000 Growth</u>	<u>% Change</u>	<u>2000 People/Acre</u>	<u>% Growth Between 60-70</u>
Marin	333,375	207,500	.6	293,400	85,900	41%	.9	42%
Napa	509,048	79,700	.2	151,600	71,900	90%	.3	20%
Solano	528,400	173,600	.3	329,200	155,600	90%	.6	26%
Sonoma	1,007,851	205,200	.2	477,900	272,700	133%	.5	40%
State	32,033,280	20,026,000	.6	29,277,000	9,251,000	46%	.9	32%
Bay Area	4,545,255	4,643,200	1.0	6,639,500	1,996,300	43%	1.5	29%

Source: Sonoma County General Plan Bulletin, March 1975, Appendix II.

Out of a current labor force of nearly 80,000, the unemployment rate, which has persisted over the past decade, is caused by a number of factors. Sonoma County is growing faster than its job opportunities, largely because new residents can commute out of the county if suitable local employment is not available - nearly 3,000 commute daily to San Francisco. Agriculture employment has been declining steadily because of automation and the reduction of agricultural lands. While agriculture, lumber, and wood products industries still provide considerable seasonal employment in adjacent areas, they no longer dominate the economy.

The retail trade and service industries, which cater to an increasing population, provide most of the community's jobs, and well-trained workers in clerical occupations are usually in demand. The area's several major medical facilities create a continuing demand for classes of professional and technical medical personnel, particularly registered nurses and nurses' aids. On the other hand, there is a surplus of workers in semi-skilled occupations and untrained youth. Seasonal and part-time workers and commuters to other areas are potentially available for industries offering year-round employment.

Table 4

Employment Groups in Sonoma County

	<u>1940</u>		<u>1950</u>		<u>1960</u>		<u>1970</u>	
	<u>Number</u>	<u>% of Total Employment</u>	<u>Number</u>	<u>% of Total Employment</u>	<u>Number</u>	<u>% of Total Employment</u>	<u>Number</u>	<u>% of Total Employment</u>
Agriculture								
Forestry & Fisheries	8,267	35.00	8,721	24.15	5,458	11.30	4,463	6.59
Mining & Con- struction	1,412	6.00	3,202	8.87	3,853	7.98	4,881	7.20
Manufacturing	3,317	14.04	3,926	10.87	7,899	16.35	8,267	12.20
Services	10,624	44.96	20,259	56.11	31,097	64.37	50,142	74.01
Total Employment	23,620	100.00	36,108	100.00	48,307	100.00	67,753	100.00
Total Population	69,052		103,405		147,375		204,885	

Source: U.S. Bureau of Census: Employment

Recreation in Sonoma County varies from the coastline to farmland to Redwood forest. Wine tours are also a popular tourist attraction. Approximately three million people visit the County's varied recreation attractions annually. The majority of this travel occurs in the summer months with heavy concentration on the weekends. During the summer, a typical Saturday or Sunday experiences 45,000-55,000 recreationists traveling to the various areas. Many are residents of other Bay Area counties and a substantial number are attracted from the Sacramento Valley. Figures developed by the Sonoma County Parks and Recreation Department suggest that most large recreation areas such as Sonoma coast beaches and Russian River locations attract 50-75% of their patronage from outside the County.

A large proportion of the growth in recreation demand will therefore be outside the County's immediate influence as other Bay Area counties continue to develop and look to Sonoma County for regional recreation use. Also, the population growth within the County itself will place increasing pressure on recreation facilities.

BLM lands in the past have played a minor role in the changing Sonoma County economy. However, with the potential development of federal lands in the known Geothermal Resource Area, the BLM lands may play an increasing role in the County's economy. The impact of this development will be discussed in the section on geothermal development.

SONOMA COUNTY

	<u>1965</u>	<u>1969</u>	<u>1972</u>	<u>1973</u>
Population	178,900	198,200	215,500	227,400
Taxable Retail Sales	208,074	273,317	408,019	479,835
(in thousands of dollars)				

Total Assessed Valuation 1974-75

	Secured	Unsecured
Land	\$305,780,255	\$ 136,442
Improvements	400,399,485	7,834,398
Personal Property	30,076,152	39,919,286
Total Gross Values	\$736,255,892	\$47,890,126
Less Exemptions		
Homeowners' Property Tax	\$ 81,735,052	\$ 51,275
Business Inventory	10,747,717	12,644,033
Other	14,002,241	1,192,083
Total	106,485,010	13,887,391
Grand Total	\$629,770,882	\$34,002,735

Grand Total for Secured & Unsecured \$663,773,617.

County Agricultural Production (\$)

1965	70,668,280	1970	77,461,679
1966	80,188,980	1971	81,867,365
1967	74,293,067	1972	87,836,830
1968	78,237,807	1973	126,668,540
1969	76,607,105	1974	123,406,740

Average tax rate per \$100 of assessed value for 1973-74: \$11.72

1974-75 Total Budget: \$238,643,495

Total Tax Levy \$ 72,713,095

Major Employers

<u>Name of Employer</u>	<u>Business</u>	<u>Number of Employees</u>
Point Saint George Fisheries	Fish products	251-400
Ecodyne Corp., Ecodyne Cooling Prod. Division	Cooling towers	400 ⁺
The Press Democrat	Newspaper	251-400
Santa Rosa Shoe Company	Shoes and boots	251-400
Rietz Manuf. Co.	Processing equipment for chemical, food, & paper industries	400 ⁺
Hewlett Packard	Electronic instruments	400 ⁺
Optical Coating Lab, Inc.	Thin film optical coatings	400 ⁺

Sources: Sonoma County Chamber of Commerce and Sonoma County Economic Development Board

LAKE COUNTY

Lake County derives its name and main recreation attraction from Clear Lake. Clear Lake is 18 miles long and up to 8 miles wide creating 100 miles of shoreline. The lake covers an area of 43,800 acres, or 1,171,800 acre-feet and is the largest, natural, warm, fresh water lake entirely within the State of California.

The County occupies a land area of 1,256 square miles. Lake County relies heavily on agriculture, recreation and forestry as major industries. There is very little manufacturing but many service type businesses. Santa Rosa is the basic trading area serving Lake County.

Lake County is sparsely populated especially north, east and south-east of Clear Lake. Its 1970 population was 19,700, which represents a 42% increase over the 1960 population of 13,900. Since 1960, the population of the county has grown faster than the state (1960-1970 county growth = 41.7%; state = 26.2%), resulting from immigration and not natural growth. These mostly are people who previously have been recreation homeowners (part-time residents) but who now have retired in Lake County.

Table 5

Population Increases

	<u>Lake County</u>	<u>U.S.</u>
1940-1950	Gain of 42.3%	Gain of 14.5%
1950-1960	Gain of 20.1%	Gain of 18.5%
1960-1970	Gain of 41.7%	Gain of 10.2%

Although Lake County is influenced by the Bay Area economy, its employment increase is a very distinct contrast. This is attributed to the difference of economic bases. Lake County's biggest increases have been in Services and in Finance - Real Estate.

Of all the northern counties in the district, Lake is the only one that has substantial increase in employment since 1960. From 1960 to 1968 its employment increased 1376, from 1618 to 2994. This was almost an 85% increase. Lake County's primary recreation-tourism income, however, is seasonal, resulting in an unusually high unemployment rate in the off season. Along with the seasonal resort workers, the pear and crop season and allied harvesting practices contributed to an annual average of 11.6% unemployment for 1974.

Table 6

<u>Unemployment Rate</u>					
January	15.5%	May	10.6%	September	6.8%
February	16.6%	June	9.4%	October	7.6%
March	16.5%	July	8.6%	November	10.7%
April	15.2%	August	7.1%	December	14.6%

Source: Lake County Overall Economic Development Plan for 1974-75.

Lake has the lowest per capita personal income of any northern coastal county. Total personal income for the North Coast Counties has been projected to grow at a 5.4% annual rate as contrasted to that for Bay Area Counties at a 4.3% annual rate through 2020.

Lake County has had a 94% increase in personal income from 1960 through 1968. Income from property and transfer payments tripled during this period. This overall increase arises from population growth as well as increasing per capita income. From 1971-72 the County's personal income grew 4.4% (Statewide average was 7.2%), and this was during a time of faster than average population growth in the county, (4.7% annual growth to 1.8 statewide). The significant of this is that Lake County residents are not participating in the statewide growth of personal income.

During inflation, purchasing power of Lake County residents should decrease because many now live on fixed incomes. Gross county-wide figures do not reveal the impact of this situation because one sector of personal income - farm income - is up 46% in 1973 over 1972. Thus, while a small number of people have significantly larger personal income, the majority's is static, skewing the statistic. Lake County has a much lower proportion of personal income in wages and salaries than similar north coast counties and a much higher proportion of transfer payments. Transfer payments include welfare and Social Security; in Lake County, 84% is Social Security.

All these trends show more people are retiring to homes they already owned in the area. They show neither a growth in personal wealth and disposable income, nor do they contribute to positive economic development trend for the country.

With the rapid increase in population and the recreation opportunities, land speculators moved in also to create subdivisions. Boise Cascade is one of the major developer-subdividers. In their Hidden Valley Lake subdivision there is a total of 3408 lots on 996 acres. In another subdivision, Hidden Valley Ranchos, 168 lots were located on 996 acres. In Clear Lake Riviera, approximately 1000 acres were subdivided into 2988 lots.

Major developer-subdivision activity in Lake County peaked in fiscal 1968-69 with 16,214 lots recorded in 58 separate final tract maps.

Reflecting the nationwide trend, only 125 new property parcels were recorded during 1974 with none of them in subdivisions. All were the result of lot splits or parcel maps. The most building activity has been individual house construction at the Boise Cascade development a few miles north of Middletown where 3,000 lots were sold but reportedly only 100 homes have been built in 10 years.

With the decline in real estate and with the seasonal and gasoline dependent characteristics of recreation, the fruit and nut crops and livestock remain the most important income sources for Lake County. The geothermal industry, if developed, will be very large in capital investment but low in employment. However, its payment of county taxes can add revenue to the county.

Agriculture continues to be the number one contributor to the overall economic activity of Lake County. The 1974 Agricultural Crop Report lists gross sales of farm products of \$19,687,110 down from 1973's record high by 11%. This figure represents gross sales, not net profits or total economic activity. Net profits continue to be held down due to ever increasing production costs.

New vineyards are being planted, thereby primarily replacing forage crop land. With the increasing wine grape development, agriculture labor has more year around work, continuing the statewide downward trend in migrant labor.

The pear and walnut processing facilities employ over 2,000 people on a seasonal basis during harvest, resulting in a payroll during August, September, and October of over 1.5 million dollars.

Further, "ag" development will depend on water development and proper land use control through zoning.

Table 7

Gross Value of Agricultural Production 1973-1974

1963	\$ 8,619,280	1969	\$15,416,420
1964	10,831,910	1970	10,778,209
1965	9,128,330	1971	12,991,950
1966	13,697,900	1972	15,231,200
1967	13,028,070	1973	22,155,400
1968	16,795,050	1974	19,687,110

Source: Lake County Overall Economic Development Plan for 1974-75.

1974 proved to be the year when geothermal development came to be considered as a potential industrial development in Lake County. It is now considered a major industrial and real estate activity with 100,000 acres of County land now under geothermal lease. Major oil companies

including Union Oil and Gas Company, Burmah Oil and Gas Company, and Shell Oil and Gas Company all applied for geothermal drilling permits in Lake County during the year with six permits issued after extensive public hearings. Burmah Oil has completed drilling 14 steam wells and Union Oil completed one with a permit for one more. However, as of now, there is not a geothermal energy plant. It is hoped that the plant may be completed by 1977 or 1978. A more complete look at the impact of this industry is included in the geothermal section of this report.

With Lake County's economy closely tied to recreation, geothermal development and environmental quality i.e., for water sports and hunting, BLM has the opportunity to use its lands for multiple use and thereby adding to the County's economy. However, without careful planning to minimize the adverse impacts, a gain in one sector of the economy may result in the loss in another sector.

LAKE COUNTY

Population of Lake County and Its Subdivisions

1970 and 1960 U.S. Census

	<u>1960</u>	<u>1970</u>	<u>Percent Change</u>
Lake County	13,786	19,548	+41.8
County Subdivisions			
Lakeport Division	6,314	7,963	26.1
Lakeport City	2,303	3,005	30.5
Lower Lake - Middletown Division	3,977	6,614	+66.3
Clearlake Highlands	-	2,836	-
Upper Lake - Clearlake Oaks Division	3,495	4,971	+42.2
Lucerne	-	1,300	-

Taxable Sales

1950	\$ 9,000,000	1971	\$35,735,000
1960	16,000,000	1972	41,515,000
1965	24,000,000	1973	48,929,000
1970	31,544,000	1974	57,302,000

Social Security

8,500 persons received monthly benefits in the amount of \$1,300,000 or a total of \$15,600,000 for 1974 as compared to 7,322 persons in 1973, who received monthly benefits in the amount of \$1,088,000 or a total of \$13,056,000 annually.

Breakdown by Age and Category During 1973

Retired workers	4,682	Monthly benefits	\$762,000
Disabled workers	640	Monthly benefits	126,000
Dependents of retired workers	808	Monthly benefits	200,000
Disabled worker dependants	857	Monthly benefits	200,000
Survivor benefits	857	Monthly benefits	200,000
Men 3,877	Women 3,182		

Wage and Salary Employment

	January 1975	October 1974	January 1974
Employment	7,000	7,875	7,250
Unemployment	1,550	650	1,325
Rate	18.1	7.6	15.5
Manufacturing	100	200	100
Trade	850	1,000	825
Services	775	950	875
Government	1,275	1,325	1,300
Other	600	750	625
Agriculture	700	850	850

Assessed Valuation

1950-51	\$19,543,500	1970-71	\$ 97,037,300
1960-61	35,694,920	1971-72	102,405,280
1965-66	52,046,960	1972-73	105,870,440
1969-70	83,632,150	1973-74	111,664,540

Property tax rates for 1974-75: County \$2.53 City \$1.80
Average tax rate per \$100 of assessed value: \$7.56

Number of Land Parcels in the County

1972-73	1973-74	1974-75
57,740	58,630	59,281

Land and Water Area

Water Area		Land Area		Total Area	
Acres	Sq. Miles	Acres	Sq. Miles	Acres	Sq. Miles
45,120	70.5	803,840	1,256.0	848,960	11,326.5

Land Use

	Percent	Acres
Agriculture	23%	180,905
Recreation	46%	366,687
Residential	.5%	4,250
Commercial	21%	175,237
Unusable	9.5%	76,761

51% of Lake County land is owned by Governmental agencies

Installations on Clear Lake

128 Motels or Resorts with 1,434 units and 50 Trailer Parks and Campgrounds with 2,652 spaces. Total 178.

Total of 1,358 Piers. 1,078 privately owned, 167 resort piers, 103 commercial piers, 10 County, City or State owned piers, 415 launching ramps of which 90% are privately owned.

Use of Clear Lake

340,000	Angler Days	1,875,000 hours
*360,000	Boating and Yachting Days	1,080,000 hours
250,000	Swimming Days	750,000 hours
*250,000	Water-skiing Days	750,000 hours

Total of 1,200,000 Recreation Days or 6,000,000 hours annually.

*Average of 3 persons per unit

Source: Lake County Overall Economic Development Plan 1974-75.

MENDOCINO COUNTY

Mendocino County is a member of the "Redwood Empire" counties. The county seat, Ukiah, is located 120 miles north of San Francisco.

Mendocino County ranks 34th in population among the 58 counties in California, with .3 percent of the total population. The 1970 census indicates that the population of Mendocino County at 51,101, remained nearly unchanged from the 1960 count, with an increase of only .1 percent. This is in marked contrast with the state as a whole, which experienced a 27.0 percent increase in population.

Agriculture in the County developed primarily in response to local needs and became the second major economic enterprise. Farming, cattle and sheep raising, and dairy farms, combined with lumbering to shape the patterns of land use.

Historically, a variety of crops, such as peas, potatoes, and hops, have been raised at various times. However, the demand for such crops is no longer sufficient to justify their cultivation. Sheep and cattle raising are also becoming uneconomical due to increasing costs and property taxes. Dairy farming is the major agricultural enterprise along the coastal terraces but the pressure from rising costs has eliminated all but those located in the southern region of the County coast. The County assessor's records show that between 1963 and 1971, the County shoreline area experienced roughly a 140 percent increase in assessments for ocean front property with homesite potential. Farmers faced with this continual rise in taxes have also been experiencing a declining demand for their products.¹ It is difficult to distinguish between the effects of increased taxes and simultaneous increases in other costs.

Due to climatic conditions that are favorable for the production of high quality wine grapes and pears, they are now the major agricultural income source. Estimated gross values of agriculture crops amounted to a record \$22 million in 1971 as a result of favorable crop and market conditions in the wine grape industry.

Lumbering has been the basic industry in Mendocino County since salvage crews from San Francisco discovered the existence of the big coast redwoods in 1850 while they were trying to reach a ship gone aground on the rocks at Noyo Harbor. After World War II the demand for housing produced a boom in the lumber industry. Mills proliferated, increasing in number from 50 before the war to 129 by 1948. Coincident with the increase in mills was a further decrease in coastal forest. The boom was short-lived, however, and just two years later machinery for the decline

¹"The Mendocino Coast - A Vanishing Resource," The Mendocino Coastal Research Group, Western Interstate Commission for Higher Education (WICHE), 1972.

was set in motion. A few larger lumber companies acquired most of the privately-owned timberland and one by one the many small mills closed down as they became unprofitable. Presently, there are 26 wood processing plants or mills.

The county's greatest wealth is still its large growths of coniferous and hardwood timber, which are estimated to be about 30.5 billion board feet in stands distributed over the area. The three largest employers in the County are Louisiana Pacific, Masonite Corporation and Georgia Pacific all of which produce lumber and wood products. Together they employ 1535 persons and pay out an estimated payroll of over \$9 million.

Since these three lumber companies represent some of the largest forestry products interests in the state, a detailed look at the companies will be dealt with in the forestry section of this report. What is of crucial importance to the local economy is the projections for these companies in the County.

Louisiana Pacific, which is the largest employer in the County (employing 900 people), is projected to have harvested all of its timber resources in Mendocino County within 15 years if it continues its present rate of cut. Following the old lumbering pattern of "cut out and get out", L-P does not show an interest in maintaining itself in the County. This policy will leave approximately 100,000 acres cutover and only partly reforested.

Similar projections for Georgia-Pacific show that G-P will have cut through all of its old growth by 1986 and all of its new growth by 1996. After this point there is a projected 20-year gap in timber production before G-P can begin to harvest its lands again. G-P has recognized this problem and has been taking steps to replant its lands (G-P owns approximately 215,000 acres) with good seedling stock for the future. However, the projected 20-year gap, created because of the growing time constraints, of production is inevitable.

Masonite Corporation appears in the projections to be the only major timber company that has based its county harvest on a sustained yield within Mendocino County harvesting of its 93,500 acres on a sustained yield basis within Mendocino County.

Table 8

AGRICULTURAL PRESERVE STATUS

Estimated Acres of Commercial Timberland for Owners of More than 20,000 Acres:

	<u>Preserve Acres</u>	<u>Non-Preserve Acres</u>	<u>Total Acres</u>
Georgia-Pacific Corp.	210,000	5,000	215,000
Louisiana-Pacific Corp.	100,000	-	100,000
Masonite Corp.	83,517	10,000	93,517
Jackson State Forest	50,883	-	50,883
Harwood Products	32,000+	2,000+	34,000
Longview Fibre Co.	34,142	2,721	36,863
Dennis, Jeff	-	4,000	4,000
Beacon, Robert	-	23,000	23,000
Baxter, A. M.	<u>4,407</u>	<u>382</u>	<u>4,789</u>
TOTALS	514,949	47,103	562,052

The first four owners listed above pay about \$2,545,800 in taxes on their timber and timberland only. Improvements and personal property are not included. This \$2,545,800+ makes up approximately 13.40% of the total tax roll for 1973-74.

Source: Mendocino County Assessor's Office

Since BLM lands contribute only an insignificant proportion (in Humboldt and Mendocino Counties approximately 0.75% of the timber cut comes from BLM lands) and since federally owned lands are managed on a sustained yield basis, federal timber lands will only be able to have a minimum role in sustaining the economy through the timber production gap. Since the timber companies currently own most of the highly productive timber lands, there is very little additional privately owned land which can be put into production.

The future for the timber industry after the old growth is cut out and the harvesting is limited to a sustained yield, will bring a slow-down in the sector. The industry will have to gear itself for a lower volume of timber harvest and to smaller diameter logs.

Light industry, recreation, and second home subdivision have begun to increase the County's income to a small degree. However, unless some major changes occur in one of these areas, they will remain just as supplemental income in comparison to the Wood Products' current income.

MENDOCINO COUNTY

	<u>1950</u>	<u>1960</u>	<u>1970</u>	<u>1973-74</u>
Population	40,854	51,059	51,100	55,000
Total Taxable Retail Sales	32 mil.	54 mil.	90 mil.	156 mil.

Assessed valuation 1974-75 for County: \$230,247,360 assessed at 25% of real cash value. Combined total industrial and commercial property tax rates 1974-75 per \$100 assessed. Total \$9.88 to \$10.86. County tax: \$3.37

Employment

Ukiah Labor Market Area, Dec. 1974

(Area includes Ukiah Valley; Est. area population 20,000)

300 Agriculture	2,000 Retail Trade
150 Agriculture Services	300 Wholesale Trade
500 Construction	300 Finance/Real Estate/Insurance
1,500 Manufacturing	1,400 Services
650 Trans./Comm./Utilities	500 Other
2,300 Government	

The Largest Manufacturing Firms in the Area

Name of Company	Employment	Products
Masonite Corporation	350	Presswood
Louisiana-Pacific	900	Lumber, Plywood-Millwork
Plywood fabricators	100	Plywood & buildings
Carousel Carpets	50	Carpets
Georgia-Pacific	140	Particle board
Philo Lumber Company	150	Lumber

Non-Manufacturing Employment

Name of Company	Employment	Type of Business
California State Offices	140	State
General, Community, and Hillside Hospitals	377	Hospitals
County of Mendocino	778	County
City of Ukiah	120	City
Ukiah Unified School District	474	Education

Source: Greater Ukiah Chamber of Commerce

Table 9

Mendocino County Land Ownerships

(Unaudited) March 1, 1973

<u>LAND AREA IN THE COUNTY</u>	<u>ACRES</u>
1. County total	2,245,000
2. Total timberland (commercial)	1,304,000
3. Total government-owned	198,000
4. Total timberland (small private owners) ¹	545,700
5. Total timberland (large private owners)	560,300
6. Total other non-timberland ownerships	951,000

EXEMPT TIMBER STANDS

1. Total acres timberland (less government-owned)	1,106,000
2. Total acres timberland (timber stands exempt)	966,000
3. Total acres timberland (small owners, timber exempt)	512,500
4. Total acres timberland (large owners, timber exempt)	453,500
5. Total acres timberland (small owners, timber taxable)	10,500
6. Total acres timberland (large owners, timber taxable)	129,500

TIMBER VOLUMES

1. County-wide total (taxable and exempt) ²	14,536,000M bd. ft.
2. Government-owned	3,900,000M bd. ft.
3. Privately-owned (taxable and exempt)	<u>10,636,000M bd. ft.</u>
4. Small, privately-owned	
a. Taxable volume	347,200M bd. ft.
b. Exempt volume	<u>4,529,200M bd. ft.</u>
	4,876,400M bd. ft.
5. Large, privately-owned	
a. Taxable volume	3,652,800M bd. ft.
b. Exempt volume	<u>2,106,800M bd. ft.</u>
	5,759,600M bd. ft.

<u>AGRICULTURAL PRESERVE CONTRACTS</u>	<u>Acres</u>	<u>Full Cash Value</u>
1. County-wide total, all land	963,869	\$128,073,580
2. Type I land	19,697	7,105,880
3. Type II land	944,172	120,967,700

¹ Small private holdings have 1,00 acres or less² If 30% or less of the original timber is left uncut it is tax exempt.

Table 10

MENDOCINO COUNTY

1972-73 Tax Roll

ASSESSED VALUES

1. County total - all property: gross	\$192,345,000
2. Small Owners, timber and timberland: gross	13,021,750
3. Large Owners, timber and timberland: gross	40,730,000
4. Mill and Logging Operations: gross	16,590,000
5. All other property: gross	122,003,250

PERCENT OF TOTAL ASSESSED VALUE (from above)

1. Small Owners, timber and timberland	6.77	} 27.94	} 36.56
2. Large Owners, timber and timberland	21.17		
3. Mill and Logging Operations	8.62		
4. All other property	63.44		
	100.00%		

TOTAL PROPERTY TAXES PAID

1. Timber and timberland, large and small owners	\$ 4,346,000
2. Mill and Logging operators	1,659,000
3. All other property owners	<u>17,760,554</u>

PERCENT OF PROPERTY TAXES PAID (from above)

1. Timber and timberland, large and small owners	24.47
2. Mill and logging operators	9.34
3. All other property owners	<u>66.19</u>
	100.00%

Source: Mendocino County Assessor's Office

HUMBOLDT COUNTY

Humboldt County is located in northwestern California along the coast in the Redwood Empire. Eureka, the county seat, lies 285 miles north of San Francisco and 125 miles south of the Oregon border. Humboldt's land area consists of 2,286,720 acres, or 3,573 square miles. It ranks 14th in size among California's 58 counties. Public ownership of land (federal, state, or local government) in Humboldt County is approximately 27%; private ownership amounts to 73%.

The County's population decreased 5.0 percent between the 1960 and 1970 Census. The drop in population appears to be due to many factors. The decade witnessed a dramatic decline in the annual birthrate, while the annual deathrate remained relatively constant.

The three counties surrounding Humboldt County also suffered a population loss during the decade 1960-70. However, most estimators have predicted a slow population growth for Humboldt County.

Per capita personal income in Humboldt has dropped below the national average in recent years. Total personal income grew at an annual rate of 6.94 percent in the County between 1969 and 1972. That compares with a national average of 7.81 percent.

Humboldt County's primary industry is lumber, although other natural resource based industries--agriculture, fisheries, and tourism--are also relatively important in the local economy. The general economic problem of Humboldt County is often characterized as one of excessive dependence on one industry, lumber, (or more accurately, the forest products), which tends to be rather cyclical in nature over time, and highly seasonal in terms of employment. Unfortunately, the other natural resource based industries of the county (agriculture, fisheries and recreation-tourism) tend to accentuate the seasonality of employment. During the summer months logging activity is in full swing, coinciding with the peak seasonal labor periods of agriculture and fisheries. In addition, the summer vacation period is when most tourists visit the county.

Humboldt County has been an important source of raw material for wood products for more than 100 years. This county, which has the largest saw-timber inventory and second largest commercial forest area of all California counties, is largely responsible for California's position as a leading state in the production of wood products.

The County ranks among the top timber producing counties in the country, and has been first in California for many decades. Today the County also leads the state in the production of lumber, softwood veneer and plywood, and wood pulp. In 1973, it alone accounted for 22 percent of the State's annual harvest with production of more than 1.09 billion board feet. Its sawmills provide more residue for pulping than any other county. Humboldt's long reign as a major supplier of primary timber products

has been supported by the large old-growth stands of redwood and, since the mid-1940's, by the harvest of Douglas fir. After 100 years or logging however, the available old-growth resource has been reduced to a level where the transition to second-growth harvesting operations is now becoming a reality.

Commercial forest land constitutes 74% of the County's area (i.e., 1,748,000 acres in commercial forest land: 465,000 acres in public ownership; 1,283,000 acres in private ownership). This forest land consists of the following resources:

Table 11

Employment of Population 16 Years Old and

Older for Humboldt County

	<u>Total</u>
Total All Industries	33,563
Agriculture, Forest and Fisheries	1,755
Mining	44
Construction	1,895
Manufacturing - total	8,389
Durable Goods - total	6,968
Nondurables - total	1,421
Public Utilities	2,020
Wholesale and Retail Trade	7,172
Finance, Insurance and Real Estate	1,000
Services	6,293
Public Administration	4,995

Source: 1970 U.S. Census

Commercial forest lands include both softwood and hardwood trees, but only softwood contributes to commercial production. Within the softwood group, Douglas fir represents 50 percent of the logs consumed and 88 percent of the non-redwood softwood volume (Oswald, 1969). Douglas fir, unlike redwood, appears evenly throughout the county and is not dominated by any one type of ownership. Redwoods, the second important softwood of Humboldt County, comprise 43 percent of the log consumption, yet make up only 18 percent of the commercial forest (Oswald, 1968). A few lumber companies own all of the commercial redwoods except those found in the new Redwood National Park and the state parks.

In 1959, the peak year for Humboldt timber production, 1,570,108,000 board feet were produced. (The average for the ten-year period 1957-1966 was about 1.3 billion board feet annually, according to the California Division of Forestry.) In general, only the large integrated lumber companies and the larger locally-owned mills have survived the technological changes and increased capital requirements in the industry. Today, the

remaining mills face the transition from usage of large, virgin-stand timber to smaller, lower-quality second-growth.

The level of timber production has declined since 1965. Current lumber manufacture is almost entirely Redwood and Douglas fir. Little utilization is being made of the county's abundant hardwoods.

The following table shows the annual timber production in Humboldt County for 1950-1970:

Table 12

<u>Year</u>	<u>Board Feet Cut</u>	<u>Year</u>	<u>Board Feet Cut</u>
1950	861,630,000	1964	1,367,838,000
1955	1,298,346,000	1965	1,301,296,000
1957	1,211,925,000	1966	1,220,336,000
1959	1,570,108,000	1967	1,134,383,000
1960	1,135,416,000	1968	1,225,648,000
1961	1,264,964,000	1969	1,165,685,000
1962	1,446,944,000	1970	1,006,072,000
1963	1,247,281,000		

Source: Overall Economic Development Plan; Humboldt County, March 1975.

Although the per capita consumption of sawmill lumber in the nation has declined over the past decade, consumption of plywood production and wood pulp has increased more rapidly than has the population. This has worked to benefit Humboldt County, which produces both plywood and pulp.

The brightest prospects for the wood products industry in Humboldt County appear to be in pulp, paper, and residue-based industries such as hardboard and particle board. These industries are based primarily on residues and they can be sustained even in the face of a decline in the total cut.

A substantial increase in shipments of logs to foreign markets has also occurred, especially to Japan.

While the industry may experience some turn-down in production in the mid-seventies, the long-term prospects appear to be for maintaining an annual cut only slightly below the present cutting levels.

The forest products industry provides a market for other allied industries, such as trucking, railroads, heavy equipment, machinery, etc. Their growth and prosperity is, therefore, closely tied to that of the forest industries.

Within Humboldt County, there are 400 acres of County Parks with picnic facilities; 54,000 acres in the BLM's King Range National Conservation Area, with 34 campsites; 53,000 acres of State Parks with 1,000

picnic sites and campsites; and 476 square miles of National Forest with 120 picnic and campsites. The newly established Redwood National Park lies in both Del Norte and Humboldt Counties and contains 58,000 acres.

The current projection of annual visitor value to the County is \$7,500,000 (Humboldt County, 1975).

Tourism, recreation and conventions are major contributors to Humboldt's "basic" economy. There is every indication that they will assume an increasing importance through the multiplier effect in the years ahead.

The number of visitor-days of recreation has been projected to increase to four million by 1980 (Humboldt County, California 1969), double the two million figure of 1969.

The future needs are indicated by the following projections:

Table 13

	<u>Motels</u> <u>(Rooms)</u>	<u>Trailer Parks</u> <u>(Spaces)</u>	<u>Campgrounds</u> <u>(Sites)</u>
1960	1,620	420	420
Annual growth rate	2%	2%	4%
1975	2,187	565	756
1985	2,668	689	1,119
1995	3,254	841	1,656
2020	4,228	1,119	4,405

Source: Overall Economic Development Plan; Humboldt County, March 1975.

The trend in the County's agriculture is toward fewer, larger farms. In 1958, there were 1,899 farms on 858,515 acres with an average size of 452.1 acres. In 1971, when the last full survey was made, agricultural acreage totaled 786,165 acres on 910 farms of an average size of 863.9 acres.

While total acreage in ag use has dropped in the decade 1960-70, the land under cultivation has become more productive in recent years. Production valuation of Humboldt agriculture for 1960-1973 is shown in the following table:

Table 14

1960	\$12,824,896	1967	\$13,701,748
1961	12,783,741	1968	14,059,016
1962	12,768,145	1969	14,481,778
1963	12,986,866	1970	16,356,997
1964	13,196,412	1971	16,247,430
1965	11,652,379	1972	16,555,671
1966	13,399,419	1973	22,002,536

Because of the nature of the current wood products industry in Humboldt County and because of the insignificant role the BLM timber sales play in the overall industry, the interaction of BLM with the local economy through the timber industry is minute. The King Range National Conservation Area, as a recreation site, is the greatest potential connection between BLM and the local economy. The extent that the King Range is developed and that recreation plays in the future economy of the county will determine the degree of future dependency of the recreation sector on BLM lands.

HUMBOLDT COUNTY

	<u>1950</u>	<u>1960</u>	<u>1970</u>	<u>1974</u>
Population	69,241	104,892	99,626	--
Retail Sales	84 mil.	138,650,000	182,349,000	316,574,000

Assessed Valuation 1974-75: County: 338,090,260 assessed at 25% of real cash value.

Average tax rate per \$100 of assessed value: \$9.44 (1973-74)

Humboldt County Labor Market Area: March-April 1975

Estimated area population	99,626
Total civilian employment	33,950
Estimated unemployment	17.5
Agriculture	1,375
Construction	925
Manufacturing and Mining	7,225
Transportation/Communication/Utilities	2,000
Trade	6,675
Finance/Real Estate/Insurance	1,125
Service	5,850
Government	9,575

Manufacturing Employment

<u>Company</u>	<u>Employees</u>	<u>Type of Business</u>
Louisiana Pacific Corp.	1,773	Lumber
Simpson Timber Company	1,503	Lumber
Crown Simpson Corporation	210	Paper and Allied Products
Halvorsen Lumber Products	175	Lumber
Bayley Suit, Incorporated	90	Diving Suits
Fluhrer Bakeries, Incorporated	75	Bakery

Non-Manufacturing Employment

<u>Company</u>	<u>Employees</u>	<u>Type of Business</u>
Eureka Fisheries, Incorporated	350	Seafood
Lazio's Seafoods	275	Seafood
Pacific Telephone	250	Phone Services
Northwestern Pacific Railroad	125	Railroad Com-freight transport

Source: Greater Eureka Chamber of Commerce

The Ten Most Valuable Pieces of Property

1. Crown-Simpson pulp mill	\$41.0 million
2. Louisiana-Pacific pulp mill	33.3 million
3. P.G. & E. atomic power plant	29.4 million
4. Pacific Lumber Company Mills	17.4 million
5. Simpson Timber Company sawmills	7.3 million
6. Louisiana-Pacific sawmill	6.45 million
7. Louisiana-Pacific plywood mill	5.7 million
8. Pacific Lumber sawmill	4.0 million
9. Humboldt Flakeboard, particle board	3.2 million
10. Simpson Timber, remanufacture	3.08 million

Humboldt Bay Lumber Exports, (in long tons)

1950	46,568	1963	167,676
1955	177,776	1964	154,547
1956	176,125	1965	235,851
1957	235,709	1966	219,374
1958	225,590	1967	318,175
1959	188,764	1968	888,281
1960	184,351	1969	581,654
1961	153,462		
1962	191,904		

Source: Overall Economic Development Plan: Humboldt County, California, March 1975.

TIMBER RESOURCES

The California forest products industry is quickly coming face-to-face with the physical constraints imposed by the diminishing old growth stands and the poor to non-existent reforestation practices of earlier lumbering operations.

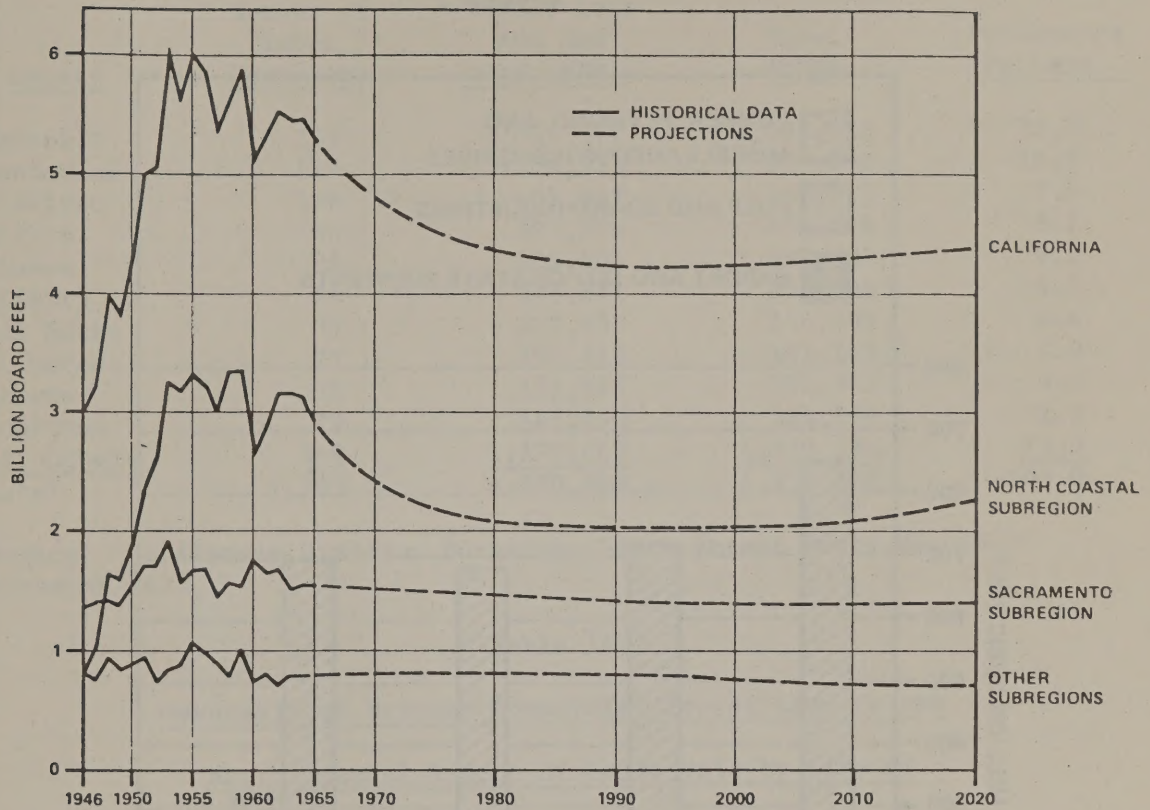
The California economy will continue to grow and the population is projected to triple in 50 years. Along with this growth will be an increasing demand for wood products in California as well as nationwide. But self-sufficiency in regional timber resources - which was both possible and necessary in the early development of the State - is no longer possible or necessary. The large areas of old-growth timber on private lands - which have been the mainstay of the forest products have fallen in the face of the rising demand. A further decline in log production - to 80% of the current levels - is anticipated by 2000. Wood products originating out of State, which currently account for a substantial part of the wood products consumed in California, will become increasingly important in meeting the anticipated growth in demand. (D. Oswald, 1970).

Factors other than the availability of old-growth timber will also have an impact on the amount of consumable wood available from California forest lands in the future. Continued loss of commercial forest land, through conversion i.e., for grazing lands, subdivisions, etc., or dedication (i.e., recreation, wilderness areas) to non-timber uses, will further decrease the commercial forest land base. Most of the loss will occur in the resource subregions that are adjacent to the centers of population growth.

Looking at just the North Coastal subregion which is comprised of the main forest products sector of the Ukiah BLM District, it can be seen that since the mid-1950's when the California log production turned downward, log production has fallen 12% from the high levels of the mid and late 1950's. This has partly been due to the decrease in the production of Douglas fir timber and partly due to the rapid depletion of old-growth stands.

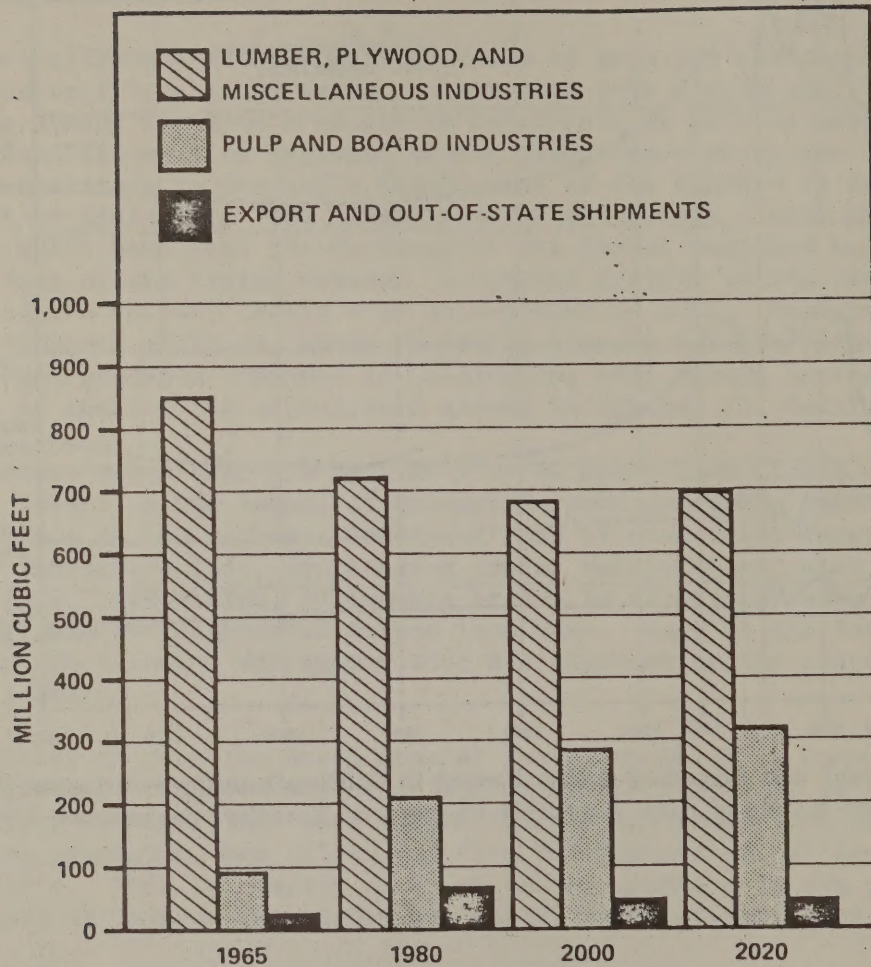
The downward trends in log production reflects the timberland ownership patterns. In the ownership patterns of timberlands some important trends have emerged in the last 15 years. In broad terms, there has been a substantial increase in the total area of large holdings, accompanied by a large decline in the area of medium forest holdings and a significant but smaller decline in the area of small holdings. Within the small-ownership group, there has also been an increasing fragmentation of the smaller properties.

Figure 1



— Recent and projected timber harvest in California and selected subregions, 1946-2020. (Source: historical data, California Division of Forestry; projections, USDA Forest Service)

Figure 2



— Estimated wood consumption in California by industry group, 1965-2020.

Source: Daniel Oswald, "California's Forest Industries -- Prospects for the Future," USDA Forest Service Resource Bulletin PNW-35, 1970.

Table 15

California Timber Production for 1973

<u>County</u>	<u>Number of Timber Operators</u>	<u>Veneer Logs And Saw Logs (MBM)</u>	<u>Total (MBM)</u>	<u>Production Percent</u>
Humboldt	258	1,093,377	1,098,911	22.3
Mendocino	119	529,523	529,869	10.8
Siskiyou	116	461,537	462,213	9.4
Shasta	148	397,296	401,546	8.2
Plumas	81	305,403	305,437	6.2
Trinity	64	233,871	235,035	4.8
Del Norte	32	212,933	216,882	4.4
El Dorado	73	196,444	197,163	4.0
Tehama	25	151,646	151,732	3.1
Tuolumne	29	145,190	145,190	2.9
<u>All Others</u>	<u>348</u>	<u>1,173,469</u>	<u>1,179,510</u>	<u>23.9</u>
<u>Total</u>	<u>1,293</u>	<u>4,900,689</u>	<u>4,923,488</u>	<u>100.0</u>

Source: California Division Forestry, State Forest Notes No. 56,
December 1974.

Table 16

Ownership of Private Commercial Forest Land in theNorth Coastal Region of California by Size ofHoldings: 1953 and 1960

(Millions of Acres)

	<u>Total</u>	<u>Holdings of 50,000 acres and larger</u>	<u>Holdings of 5,000 to 50,000 acres</u>	<u>Holdings under 5,00 acres</u>
1953	3.33	0.81	0.87	1.66
1960	3.32	1.20	0.69	1.43

Source: Zirruska, Cox, Poli and Personen, "The Commercial Forest Resources and Forest Products Industries of California," California Agricultural Experiment Station, 1965.

An important ownership pattern which should also be noted is the tendency toward stratification of types of ownership according to the major timber types. Large private holdings are prevalent in the coastal redwood belt, medium and small private holdings are typical of the central Douglas fir belt, and public holdings tend to be concentrated in the pine-Douglas-fir belts of the less accessible eastern and northeastern portions of the region.

The ownership patterns are of particular interest when realizing the extent by which the North Coastal region industry dominates all other regions within California. In 1965, the North Coastal region contained 53 percent of the 700 logging establishments in the State, 41 percent of the sawmills and planing mills, and 46 percent of the veneer and plywood plants. However, only 2 percent of the millwork and miscellaneous plants were located in the region. The North Coastal region contained 55 percent of the State's installed sawmill capacity as well as 68 percent of the softwood plywood capacity, 35 percent of the particleboard capacity, and the only hardboard plant in the State. With the recent completion of two pulpmills, the North Coastal subregion now has 50 percent of the State's installed woodpulp capacity, enhancing its position as California's center of primary forest products manufacture and doubling the State's pulping capacity. (Oswald, 1970)

The forest products companies which dominate the North Coastal region are Georgia-Pacific Corporation, Louisiana-Pacific Corporation, Masonite Corporation, and Simpson Timber Company. None of these companies are headquartered in the state of California. They are all involved in the integrated production of forest products to varying degrees.

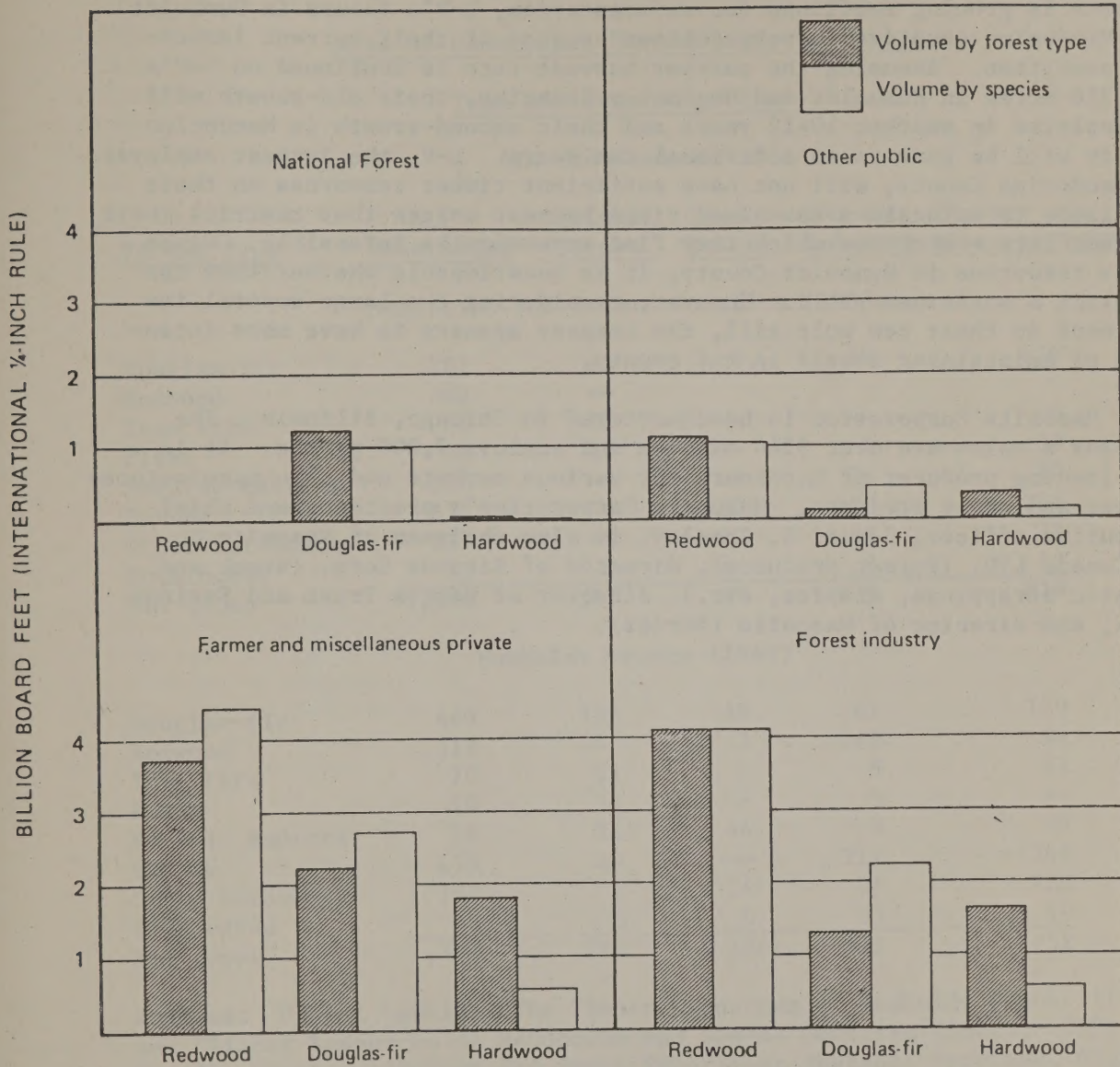
Georgia-Pacific is headquartered in Portland, Oregon. Their nationwide sales is \$1.70 billion and they employ 34,000 persons. Their production covers a wide range of products including: plywood, lumber, particleboard, adhesives, speciality plates and cups, paper bags, gypsum and chemical products, charcoal briquets, doors, and wooden crates and baskets. G-P's primary holdings in the North Coastal region are in Mendocino County where they have a total of 232,727 acres.

Louisiana-Pacific (L-P) was formed in September, 1972, through the transfer of a substantial portion of the assets of Georgia-Pacific Corp. in settlement of an FTC anti-trust suit. The company is headquartered approximately three blocks from G-P in Portland. L-P's sales are \$272.62 million and employs 6,900 people. Among other products the company produces: softwood plywood, particleboard, redwood and other lumber, wooden doors, windows and kitchen cabinets, aluminum door and windows.

Sales for 1974 broke down as follows: redwood lumber 16%, other lumber 35%, panel products 18%, logs, chips, veneer, windows and doors 16% and pulp 15%. Exports were about 21% of total sales. In Humboldt County the company operates a bleached draft pulp facility at Samoa which exports a major portion of production to Japan and Europe. Capacity at year-end 1974 was 210,000 tons, with 1974 production totaling 205,000 tons.

L-P is affiliated with Jantzen, Inc. (swim and underwear) and Bazar, Inc. (retail department store chain and supermarket) by Chairman William H. Hunt who serves as a director of the two other companies.

Figure 3



— Sawtimber volume by species, forest type, and ownership.

Source: Daniel Oswald, "Timber Resources of Mendocino and Sonoma Counties, California," USDA Forest Service Resource Bulletin PNW - 40, 1972.

Even though L-P has its own nursery in Humboldt Co. in which the company is growing seedlings for reforestation, L-P's future in Humboldt and Mendocino counties is very dubious because of their current lumbering practices. Assuming the current harvest rate is continued on L-P's 224,216 acres in Humboldt and Mendocino Counties, their old-growth will be depleted in another 10-12 years and their second-growth in Mendocino County will be gone in an additional ten years. L-P, the largest employer in Mendocino County, will not have sufficient timber resources on their own lands to maintain a sustained yield harvest unless they restrict their current cuts - a choice which they find economically infeasible. Given L-P's resources in Humboldt County, it is questionable whether they can maintain a sustained yield. However, considering the large capital investment in their new pulp mill, the company appears to have more intention of maintaining itself in the county.

Masonite Corporation is headquartered in Chicago, Illinois. The company's sales are over \$240 million and employs 7,000 people. It is the leading producer of hardboard for various markets and also manufactures lumber and other products. Masonite Corporation's president and chief executive officer, Samual S. Greeley, is also chairman of Masonite Co. of Canada LTD. (forest products), director of Signode Corp. (steel and plastic strappings, staples, etc.), director of Harris Trust and Savings Bank, and director of Masonite (Africa).

Table 17

Area of Commercial Forest Land, by ForestType and Ownership Class

(In thousand acres)

<u>Forest Type</u>	<u>All</u> <u>ownerships</u>	<u>National</u> <u>Forest</u>	<u>Other</u> <u>Public</u>	<u>Forest</u> <u>Industry</u>	<u>Farmer and</u> <u>misc. private</u>
--------------------	---------------------------------	----------------------------------	-------------------------------	----------------------------------	---

Mendocino and Sonoma Counties (1968)

Douglas-fir	281	45	9	98	129
Redwood	368	--			5
True firs	33	28	--	--	34
Pines	36	18	--	4	70
Pacific madrone	100	--	6	24	206
Tanoak	418	--	32	180	78
Other hardwoods	117	3	17	19	42
Nonstocked	53	2	--	9	
All types	1,564	107	99	529	829

Humboldt County (1967)¹

Douglas-fir	469	155	48	87	179
Redwood	312	--	1	249	62
True firs	70	51	3	5	11
Pines	19	14	--	5	--
Pacific madrone	76	11	44	5	60
Tanoak	458	48	--	111	255
Other hardwoods	187	7	24	31	125
Nonstocked	94	6	6	33	49
All types	1,701	292	126	531	752

Sources: Daniel Oswald, "The Timber Resources of Humboldt County (1968)" and "Timber Resources of Mendocino and Sonoma Counties (1972)," USDA Pacific Northwest Forest and Range Experiment Station, Portland, Oregon.

¹Not included is the new Redwood National Park.

Income to the parent corporation from foreign affiliates in 1973-74 amounted to \$1,442,000. The company's major foreign affiliates are in Canada and South Africa. In the six months ended February, 1975, the company instituted substantial cutbacks in salaried personnel and hourly employees and operated significantly below capacity. These cutbacks are attributed to the downturn in the home building market and the sluggishness in other markets.

Masonite Corporation accounts for 35% of U.S. domestic unfinished and finished hardboard. Hardboard and related products accounted for 67% of 1973-4 sales and 57% of income, lumber and woodlands 20% and 29%, and other products 13% and 14%.

One of the three hardboard producing plants is located in the Ukiah District, in the town of Ukiah. This plant is supported by the approximately 113,000 acres of timberland near Ukiah which Masonite has been reported to manage on a sustained yield bases. With the company's large capital investment in the hardboard plant, and if they are practicing sustained yield management, Masonite Corporation may be projected to maintain its position in the Mendocino County economy.

Simpson Timber Company, headquartered in Seattle, Washington, is a privately-owned company. The company's sales are over \$200 million and it employs 5,500 people. As the other forest products producers in the area, Simpson Timber is integrated producing: fir, hemlock and redwood lumber, plywood, doors, insulating board products, wood tanks and pipes and engineered products, chemicals and plastics.

Simpson Timber owns 202,144 acres in Humboldt County on which it has a projected 17 years of old growth left with no age gaps in their second growth so a sustainable yield is possible. Simpson has its own nursery out of which it carries on its reforestation projects. Besides the company's own production, it is also producing, in affiliation with Simpson Lee Paper Company, paper products at the Crown-Simpson pulp mill in Arcata.

All of these forest products industries rely, in varying extents, on local logging, trucking, and maintenance companies. Local services are especially needed during the peak harvest times.

A brief overview of other aspects of ownership and production of timber in Mendocino (and parts of Sonoma) and Humboldt Counties will facilitate a better understanding of the forest products industry in the BLM's Ukiah District.

In 1968, 55 percent of the logs used by resident industries in Mendocino-Sonoma came from industry lands. Farmer and miscellaneous private lands provided 30 percent, and the remainder were from public lands. Since industry owns only 37 percent of the sawtimber in the two counties, a first appraisal might be that the cut is disproportionately heavy.

However, industry accounts for 45 percent of the old-growth sawtimber volume in the two counties - and over two-thirds of the privately held old growth. And since the cut is still concentrated in old growth, it follows that it would, therefore concentrate in the ownership that accounts for such timber. (Oswald, 1972)

When the harvest shifts more to young growth in the near future, the percentage contribution of industry lands to total harvest may well decline. This is likely because industry currently accounts for only about one-third of the young-growth inventory and the sawtimber growth in Mendocino-Sonoma.

Farmer and miscellaneous private timberlands account for more area, inventory, and growth than any other owner group in Mendocino-Sonoma. In 1968, about 190 million board feet, or 30% of the total cut was from these lands. This owner group is in a position - from the resource availability standpoint - to increase its future contribution to the harvest. Almost all of this land has young stands and, as the harvest shifts to young growth, it will likely shift to this ownership, which currently accounts for over half of Mendocino-Sonoma's young sawtimber inventory and 54 percent of sawtimber growth. Currently, sawtimber growth exceeds cut on farmer and miscellaneous private land by about 80 million board feet, and inventory and growth on these lands are increasing. (Oswald, 1972)

In conjunction with the shift to farmer and miscellaneous private timberlands, there is also likely to be increased pressure for use of public timberland. Timber on public lands is managed on a sustained yield basis, therefore under current cutting trends, public lands are likely to contribute a large proportion of the harvest as the industry lands are depleted. BLM national resource lands in the Ukiah District are not covered by a sustained yield law, however, BLM has been managing these lands on the sustained yield principle.

With the increasing influx of people and business from the Bay Area, Sonoma County is no longer dependent on a single sector of the economy. However, there is an interdependence of the 2 mills in Sonoma County for exports between Mendocino and Sonoma Counties. In 1968, almost 12 million board feet of logs moved from Mendocino forest to Sonoma mills for processing (Barrette, Gedney and Oswald, 1970), and chips for board manufacture moved from some of the Sonoma mills to the hardboard plant in Mendocino County.

Forest industries make up the most important sector of the Mendocino County economy. The county is dependent on the forest products industry for 23% of the total personal income for the County. BLM lands contribute an insignificant proportion to the industry's harvest, therefore the

industry's dependence on BLM lands is very low (.79%).¹

With the increasing demands from the public for multiple use open areas and the projected increasing demands from the forest products industry for timber, it would appear that the national resource lands with timber are an important investment for future uses.

Humboldt County is dominated by the forest products industry. In terms of economic output or production for final consumption, the Dean, Carter, et al. study indicates that the forest product sectors are 5 to 10 times as important to the county economy as all other resource sectors combined. Exports from the forest products sector alone constitute almost 40% of the county's gross product.

¹Economic Profile Supplement, BLM, Ukiah District Office, February, 1974

Table 18

Area by land class and county, Mendocino and Sonoma Counties, California, January 1, 1968.

(In thousand acres)

<u>Land Class</u>	<u>All Counties</u>	<u>Mendocino</u>	<u>Sonoma</u>
Forest:			
Commercial	1,564	1,304	260
Productive	9	6	3
Unproductive	714	469	245
Total	2,287	1,779	508
Nonforest ¹	968	466	502
Total Area ²	3,255	2,245	1,010

¹Includes swampland, cropland, pasture and range, industrial and urban areas, other nonforest land, and 25,000 acres classed as water by Forest Survey standards, but defined by the Bureau of Census as land.

²Source: U.S. Bureau of the Census, Land and Water Area of the United States, 1960, revised 1965.

Area of commercial forest land, by ownership class and county, Mendocino and Sonoma Counties, California, January 1, 1968.

(In thousand acres)

<u>Ownership class</u>	<u>All Counties</u>	<u>Mendocino</u>	<u>Sonoma</u>
National Forest	107	107	
Other public: ¹			
Bureau of Land Management	45	44	1
Indian	13	13	
State	41	41	(²)
Total other public	99	98	1
Private:			
Forest industry	529	469	60
Farmer-owned	438	314	124
Miscellaneous private	391	316	75
Total private	1,358	1,099	259
All Classes	1,564	1,304	260

¹ Estimates of commercial forest land in specific ownerships are derived by sampling methods. Consequently, they may not agree with the official estimates of the individual agencies.

² Less than 500 acres.

Source: Daniel Oswald, "Timber Resources of Mendocino and Sonoma Counties, California, USDA Forest Service Resource Bulletin PNW-40, 1972.

In terms of employment, the total employment for the natural resource based sectors (forest products, seafood processing and agriculture) is 12,040 or 31 percent of the county's total employment. The forest products sector employs approximately 22% and seafood processing combined with agriculture employs 9%. In the forestry sector which included tree farms and tree associated services, six firms employ about 50 people or .13% of the total employees, at an annual payroll of about \$193,000. The logging sector of the forest products industry consists of 126 firms providing incomes of around \$9,059,000 annually for some 960 persons of 2.47% of people employed. The sawmill sector has the largest gross output of \$124,198,000. Forty-six firms make up the sector, hiring 5,346 workers (13.76% of the total works in the county) at a cost of \$43.5 million.

The structure of the sawmills sector has changed significantly over time. Since 1960 the number of firms has decreased by over 140. In general, only the large integrated lumber companies and the larger locally-owned mills have survived the technological changes and increased capital requirements in the industry. Eleven veneer and plywood plants operate in the county with a combined work force of approximately 1,800 people or 4.63% of the total employees, and a wage bill of \$13.7 million. Other wood products i.e., flakeboard, shakes, posts, employ 500 persons or 1.29% of the workers, who earn \$1.7 million.

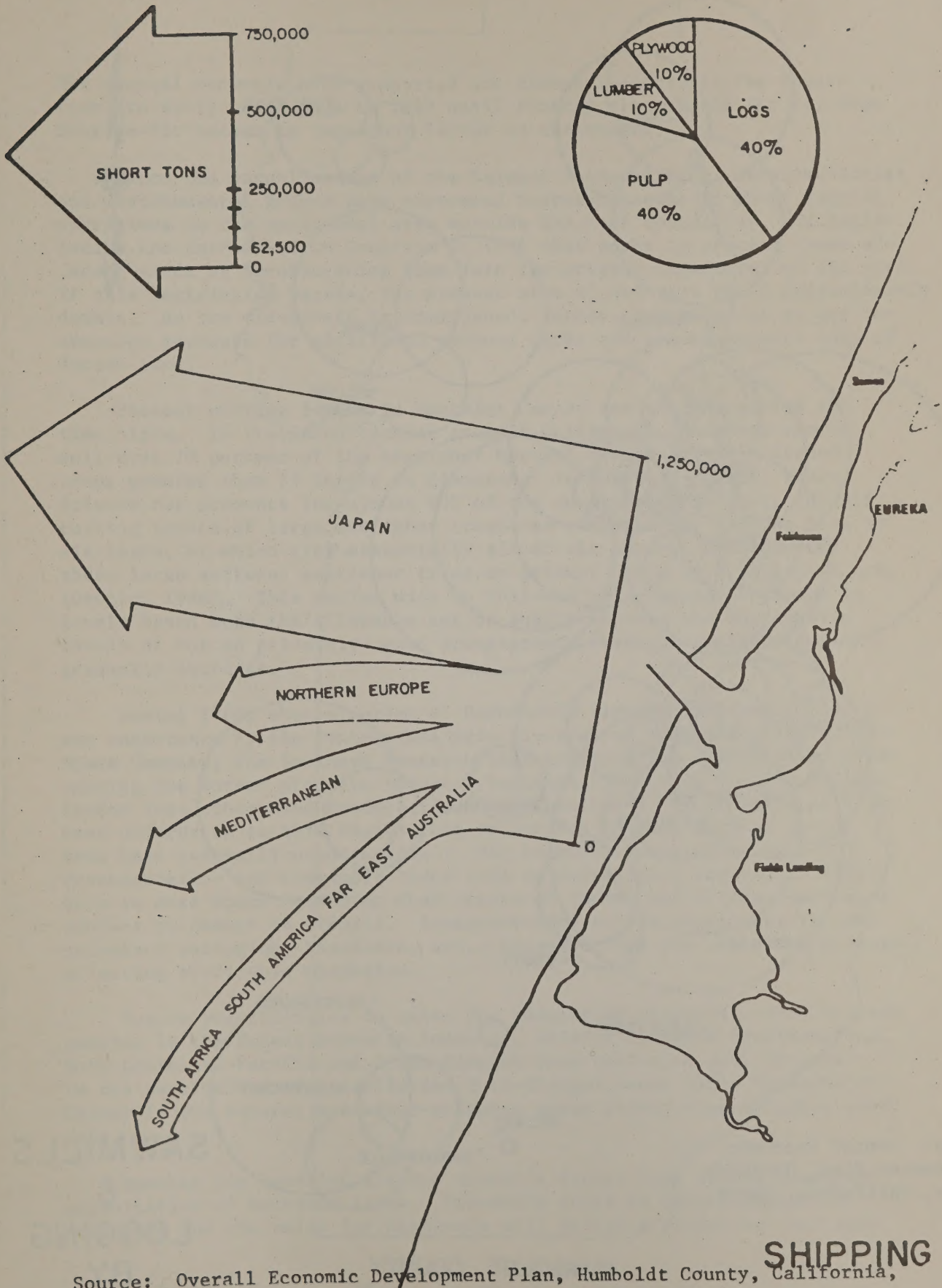
Seventy-four percent of the County's land resources are currently committed to timber production as a primary use. The timber resource and the forest industry make up much of the tax base upon which local government and public services are dependent. Over 90 percent of the value added by manufacture derives from wood products. In addition, a majority of the employment in service industries depends on the employment and income generated by the forest industries (Oswald, 1968).

The total land area of Humboldt County involves some 2,287,000 acres of which 74 percent (1,701,000 acres) is commercial forest land. Three-fourths of the commercial forest is in private ownership and how this land is managed will largely determine the county's future timber economy and activities. Timber industries account for a large amount of this land, however almost 60% (770,000 acres) and some 22% of the county's total saw timber is controlled by the rancher, farmer, and miscellaneous private owner group. This ownership group is characterized by small fragmented tracts in most cases.

Of the two major softwood species in the region, Oswald (1968) notes that some 469,000 acres or 28 percent of the county's commercial forest area is occupied by Douglas-fir. Redwood on the other hand is found on 312,000 or 18 percent of the land. All of the latter species outside of parks is found on private land, much of which is in forest industry ownership.

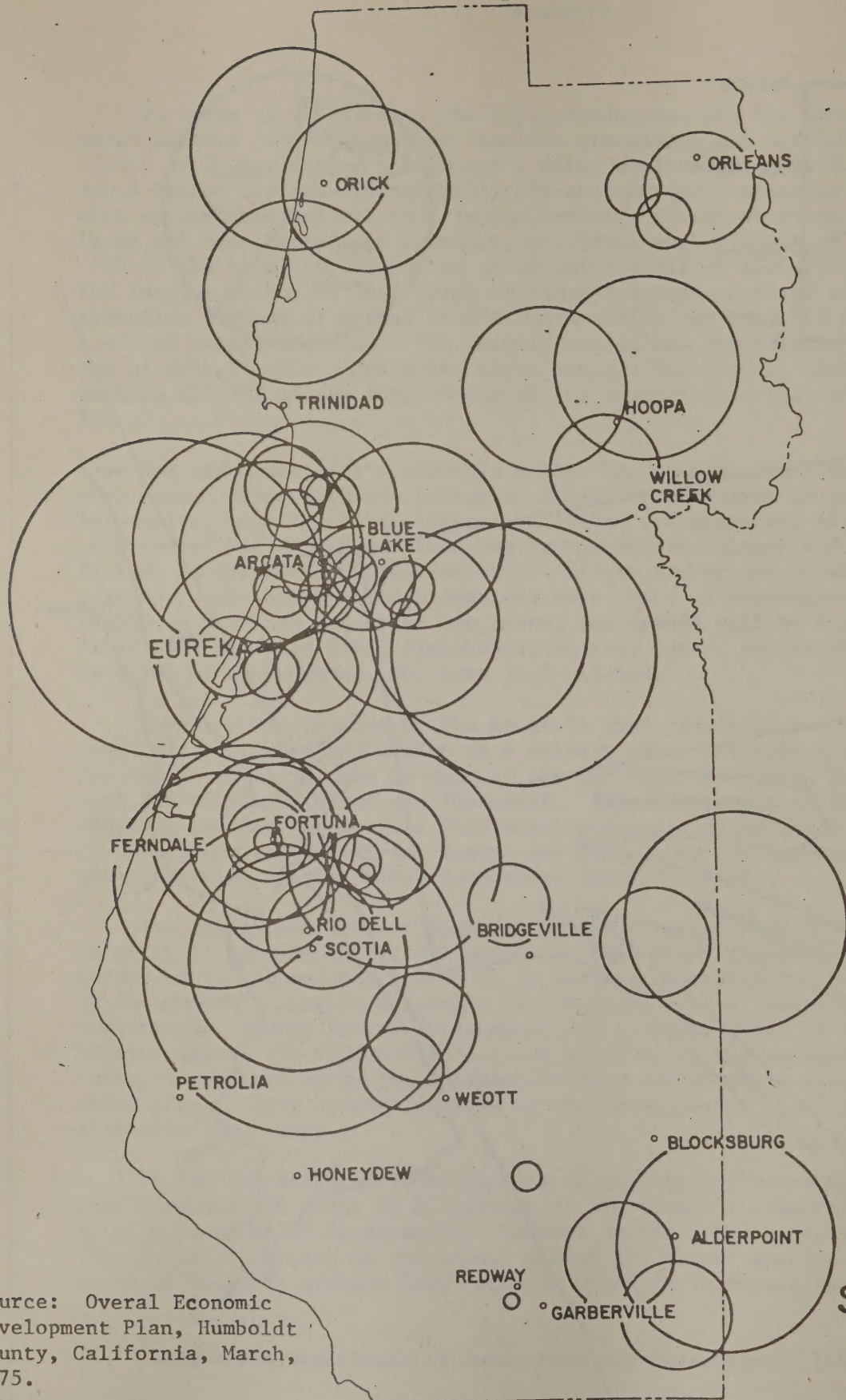
² California Department of Human Resource Development, 1969.

Figure 4



Source: Overall Economic Development Plan, Humboldt County, California, March, 1975.

Figure 5



Source: Overall Economic Development Plan, Humboldt County, California, March, 1975.

HUMBOLDT COUNTY
0 10 20

SAWMILLS
&
LOGGING
BY
AREA & SIZE

The coastal redwoods have supported the timber industry in the County from its early beginnings in 1840 until shortly after World War II, when Douglas-fir became an important factor on the scene.

Since the establishment of the Redwood National Park, conservationist and environmental groups have expressed increasing concern about logging operations in the peripheral area outside the park boundaries, and legislation was introduced in Congress in 1974 that seeks to protect these adjacent lands by incorporating them into the present boundaries of the park. If this legislation passes, the present size of the park would approximately double. As the old-growth is diminished, lumber companies can expect increasing pressure for additional redwood parks and non-commercial uses of forest land.

Present cutting levels in Humboldt County are not much below all time highs. In the north coastal area of California in recent years, well over 70 percent of the sawtimber harvest has come from softwood trees greater than 39 inches in diameter. In Humboldt County, where private cut accounts for almost 90% of the county's annual cut, current cutting levels of large sawtimber trees can continue for another five to six years, at which time essentially all of the current inventory of these large softwood sawtimber trees on private lands will have been cut. (Oswald, 1968). This period will be followed by an abrupt decrease to levels based upon the allowable cut on public forests and sustainable levels of cut on privately-owned young-growth forests; or the cut might gradually decrease.

During 1969, when a survey of Humboldt's economy and its potential was undertaken by the Systems Analysis Division of Lockheed Missiles and Space Company, the Lockheed research team examined the possibility of expanding the forest products industry horizontally and to further process lumber into other wood products, such as furniture. (Past ventures have been undertaken in this regard, but except for serving a local market, have been generally unsuccessful.) The Lockheed Report concluded that transportation and inventory costs tend to defeat such ventures. Furniture is more space consuming than stacks of lumber and is also much more subject to damage in transit. Transportation rates, which must include increased packaging, insurance, etc., became a high per unit cost adversely affecting profitable operation.

Future possibilities do exist for industrial diversification and expansion in the forest products industry, chiefly in paper manufacturing. Both Louisiana-Pacific and Crown-Simpson have indicated some interest in the possibility of establishing full-fledged paper mills in Humboldt County in the future, and water-shipping paper rather than shipping wood pulp.

Another big question for the County's future lies in the possible exploitation of hardwood types. Presently there is little demand for hardwoods and the value for hardwoods will probably always be less than

softwoods. Utilization of hardwoods blended with softwoods for pulp production has been within the plans of existing industry, but has not yet been implemented.

Table 19

Forest Products Industry Dependence

Upon National Resource Lands

Total sales from all sources in District, 1970: 1,522,214 MBF

Total sales by BLM in District, 1970: 10,772 MBF

$$\text{Industry Dependence (District)} = \frac{\text{BLM sales}}{\text{Total sales}}$$

$$= \frac{10,772}{1,522,214} = 0.708\%$$

$$\text{Industry Dependence (Humboldt County)} = \frac{6.974 \text{ (5 yr. ave.)}}{1,006.072 \text{ (1970)}}$$

$$\text{Industry Dependence (Mendocino County)} = \frac{3.798 \text{ (5 yr. ave.)}}{479,471 \text{ (1970)}} = 0.79\%$$

District Dependence on the Timber Industry =

$$\frac{\text{Total timber P.I.}^1 \text{ for Mandocino \& Humboldt Counties}}{\text{Total P.I. for six county area}^2}$$

$$\frac{\$ 231,499,448.94}{1,271,193,000.00} = .1821 \text{ or } 18.21\%$$

District Dependence on BLM timber =

Dist. Dependence ratio (timber industry) X Industry Dependence ratio (timber industry)

$$.1821 \times .00708 = .00128 \text{ or } 0.13\%$$

Source: Ukiah District Economic Profile Supplement, February, 1974.

¹P.I. is Personal Income

²The six counties are Colusa, Humboldt, Lake, Mendocino, Napa and Yolo.

Table 20

Major BLM Sales (over 150 MBF), 1970 to 6-30-75

<u>County</u>	<u>Total Volume (MBF)</u>	<u>Stumpage Value</u>
Mendocino	26,963	\$1,022,029.60
Humboldt	33,484	1,794,684.40
Total	60,447	2,816,714.00

Minor Sales (under 150 MBF), 1970-6-19-74

Total	616.95	24,147.07
-------	--------	-----------

=====

Grand Total	61,063.95	\$2,840,861.07
-------------	-----------	----------------

Source: BLM, Ukiah District Office files.

GEOTHERMAL RESOURCES

Geothermal steam originates deep inside the earth where molten rock called magma heats water trapped below the surface and produces steam. The development of geothermal steam involves harnessing this natural heat energy source in the earth for the generation of electric power. Drilling for geothermal steam is similar to drilling for oil and natural gas. Wells are drilled and the steam is piped to a nearby power plant for the production of electric energy.

A comparison of a number of projections for geothermal energy potential shows a wide spread in estimates. Low figures tend to be based on the continuation of existing technology and development of relatively few new fields. High figures are based on assumptions concerning total resources, on considerable research and development funding, and on significant breakthroughs in technology. Future geothermal capacity over the minimum estimates is contingent on both resource development and technological breakthrough.

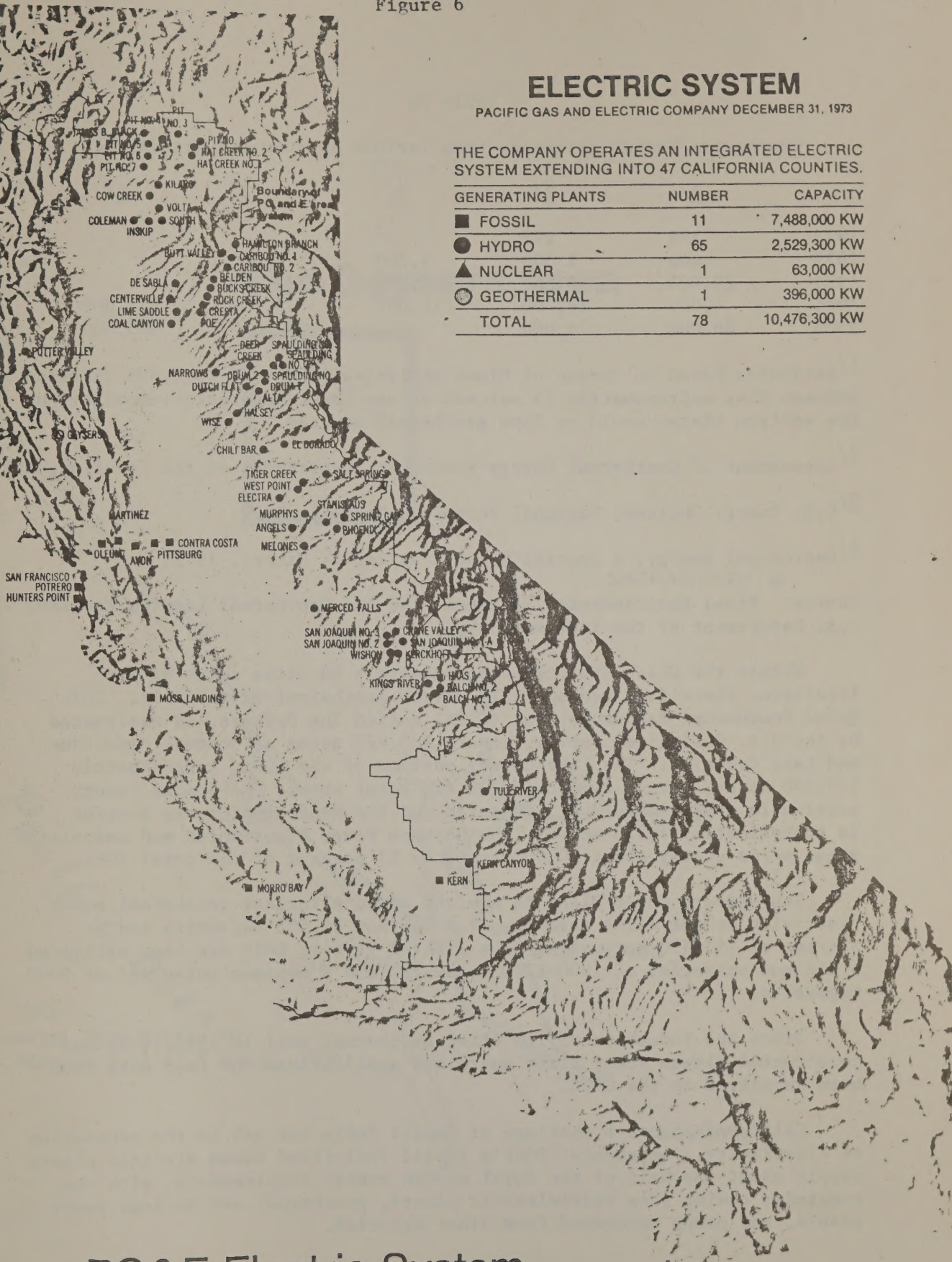
Figure 6

ELECTRIC SYSTEM

PACIFIC GAS AND ELECTRIC COMPANY DECEMBER 31, 1973

THE COMPANY OPERATES AN INTEGRATED ELECTRIC SYSTEM EXTENDING INTO 47 CALIFORNIA COUNTIES.

GENERATING PLANTS	NUMBER	CAPACITY
■ FOSSIL	11	7,488,000 KW
● HYDRO	65	2,529,300 KW
▲ NUCLEAR	1	63,000 KW
⊙ GEOTHERMAL	1	396,000 KW
TOTAL	78	10,476,300 KW



PG&E Electric System

Source: PG&E, "Environmental Data Statement for Geysers Unit 13," March, 1974.

Table 21

Geothermal Energy Estimates from Various Sources (in megawatts)

	<u>1/</u>	<u>2/</u>	<u>3/</u>	<u>3/</u>	<u>4/</u>
1972	192	192			
1975	660	1,500	1,500	1,500	
1980	22,000	10,500	10,250	2,500	
1985	4,000	19,000	19,000	3,500	132,000
2000	40,000	75,000			395,000

1/ Estimates based on Bureau of Mines analysis. The 1985 to 2,000 increase assumes that approximately 15 percent of new power generation capacity in the western states would be from geothermal sources.

2/ Assessment of Geothermal Energy Resources, Department of the Interior, 1972.

3/ U.S. Energy Outlook, National Petroleum Council, 1972.

4/ Geothermal Energy, a Special Report, Walter J. Hickel, 1972.

Source: Final Environmental Statement for the Geothermal Leasing Program, U.S. Department of the Interior, 1973.

Within the Ukiah District, approximately 80 miles north of San Francisco, there is a geologically unique geothermal steam field. This Known Geothermal Resources Area (KGRA) called The Geysers, as designated by the U.S. Geological Survey, covers 163,428 acres of Sonoma, Mendocino and Lake Counties. The Lake County portion of the KGRA, approximately 130,390 acres, covers a majority of the total area. The Sonoma County portion is approximately 31,120 acres and the Mendocino County portion is approximately 1,920 acres. The Geysers Power Plant units and associated steam wells occupy about 20,000 acres or 12 percent of the total KGRA.

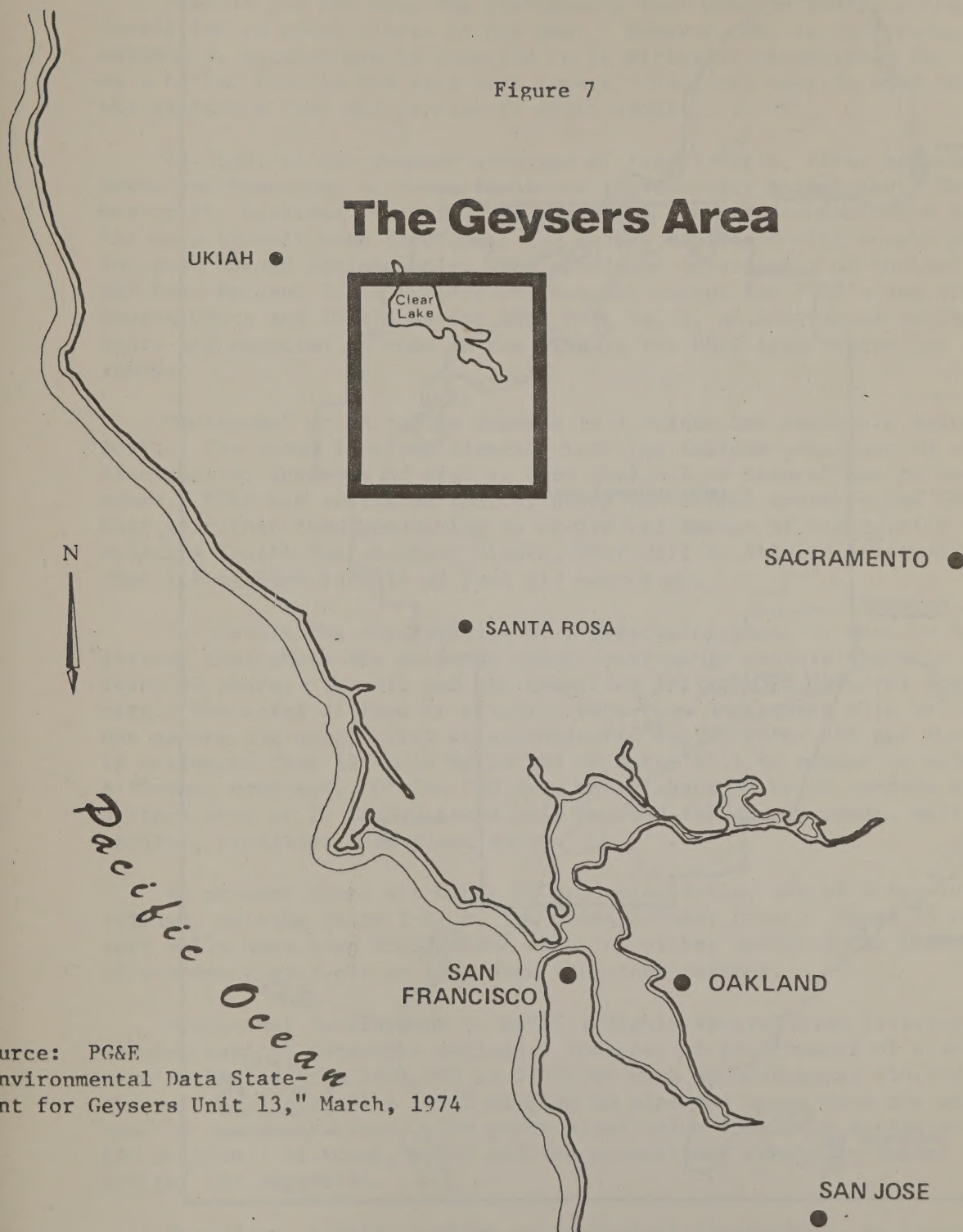
The Geysers Power Plant is now the world's largest geothermal power plant with an operating capacity of a maximum of 502 megawatts and an average of 425-450 megawatts. The greater geysers KGRA has been estimated a minimum potential of 1000-1200 megawatts and a maximum potential of 2000 megawatts.

Since the inception of its first geothermal unit in 1960, PG&E has constructed eleven power plant units and applications for four more have been submitted to the CPUC.

California faces a shortage of fossil fuels for use in the generation of electricity. At present PG&E's fossil fuel-fired steam electric plants supply about one half of the total system energy requirements, with the remainder coming from hydroelectric plants, geothermal and nuclear power plants, and power purchased from other agencies.

Figure 7

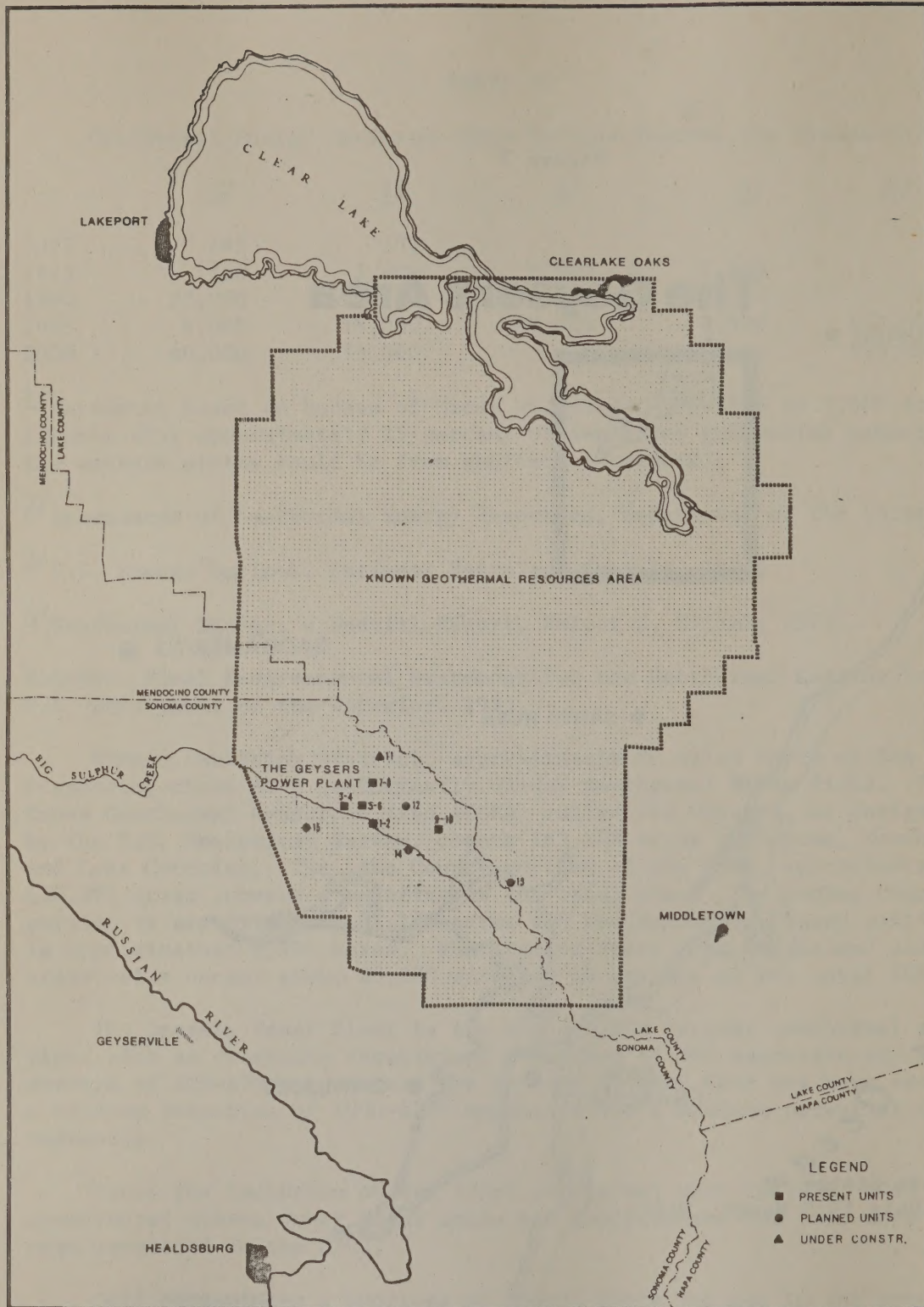
The Geysers Area



Source: PG&E
"Environmental Data State-
ment for Geysers Unit 13," March, 1974

Location Map of Geysers Area

Figure 8



Known Geothermal Resources Area

Source: PG&E "Environmental Data Statement for Geysers Unit 13," March 1974.

Natural gas has been the predominant fuel used to generate steam at fossil fueled power plants in the past. However, due to increasing curtailments, natural gas is expected to be virtually unavailable for use as a boiler fuel in the very near future. Fuel oil must be used instead, but available fuel oil is also in short supply.

In light of the present shortage of fossil fuels, other sources of power not dependent on these fuels are increasingly attractive. For the most part, baseload hydroelectric resources that are economically feasible have already been developed; any future additions will supply energy for peak demand periods only. The scheduled development of nuclear plants has been delayed for a variety of reasons; except for PG&E's two Diablo Canyon Units and SMUD's Rancho Seco Unit No. 1, no additional nuclear units are expected to come on the line in the PG&E area system for several years.

Geothermal steam at The Geysers is a unique and available source of power. The steam is piped directly into the turbine-generator to produce electricity; there is no need to burn fuel oil or natural gas to produce steam. PG&E has estimated that by using geothermal steam in the potential Unit 13 rather than generating an equivalent amount of electricity in its existing fossil-fueled power plants, PG&E will be able to conserve more than 1.4 million barrels of fuel oil each year.

To justify the construction of a generating unit, it must be demonstrated that there are adequate steam reserves to sustain the unit for at least 30 years. The oil and gas companies estimate it requires approximately 700 acres of land or slightly more than one square mile to supply one generating unit. With an approximated depletion of 20% per year, it is estimated that 12 to 16 wells per 40 acres will be needed to maintain a 30-year contract. Of the 700 acre area, about 10 to 20 percent of the surface area or 70 to 140 acres will be used for access roads, well locations, pipelines, and plant sites.

At present there are about 90 producing wells, out of about 100 wells drilled, serving Units 1-11 of The Geysers Power Plant. About 25 exploratory wells have been drilled and shut in, either awaiting the construction of a power plant unit or shut down for other reasons.

Geothermal development is still a highly speculative investment involving capital intensive outlays. The cost of development of a well has been estimated from \$400,000 to \$700,000 with an additional \$50,000 for the well head plus \$1 - 1-1/2 million to pipe the steam from the well head to the power plant. The power plant value itself is estimated at \$20 million. In total, a \$40 million expenditure can be estimated for an initial 100 megawatts.

Therefore, a major problem in geothermal development, at least in the initial stages, is the ability of the individual companies to invest in leases, invest in drilling costs, and hold on until a buyer (with the ability to locate a power plant within a mile of the wells) can be

Table 22

PG&E's Current Load Forecast For 1974-83 andActual Loads for 1968 through 1973

<u>Area Loads</u>				
<u>August Peak Demand (Megawatts)</u>				
<u>Year</u>	<u>Actual</u>	<u>Average</u>	<u>Estimated</u>	<u>Adverse</u>
1968	9,117			
1969	9,337			
1970	9,933			
1971	10,965			
1972	11,867			
1973	12,252			
1974		12,990		13,050
1975		13,790		13,860
1980		18,810		18,870
1983		22,570		22,620

<u>Annual Energy (Million kwh)</u>				
<u>Year</u>	<u>Actual</u>	<u>Average</u>		<u>Adverse</u>
1968	51,272			
1969	53,327			
1970	55,962			
1971	59,645			
1972	64,619			
1973	66,261			
1974		73,290		74,180
1975		77,640		78,530
1980		106,170		107,060
1983		127,130		127,980

secured. This barrier is a relative one, depending on the economic abilities of the companies involved in geothermal resource development. Thus, the large oil companies, of which Shell and Burma are two main operators in The Geysers area, dominate the geothermal development because of their vast capital resources.

The employment and income impacts on the local communities from geothermal development are only short-term because of the capital intensive nature of the industry. Presently, 28-30 people per rig are needed at the well head to man the drilling of the wells. The majority of these people are not from the local area but have temporarily moved into the area. With the construction of the power plants and the laying of the pipe lines from the well head to the plant, employment in the construction sector will jump. However, this increase will last only until the construction is completed at which time only a skeleton crew of maintenance men and operators will be employed (approximately 100 people for current eleven power plants in operation).

The current increment of income impact has three components: 1) Direct payroll income of PG&E's and its contractor's employees, 2) Local purchases by PG&E of material and equipment; and 3) Secondary incomes resulting from local spending by PG&E's and its contractor's employees i.e. the income multiplier effect.

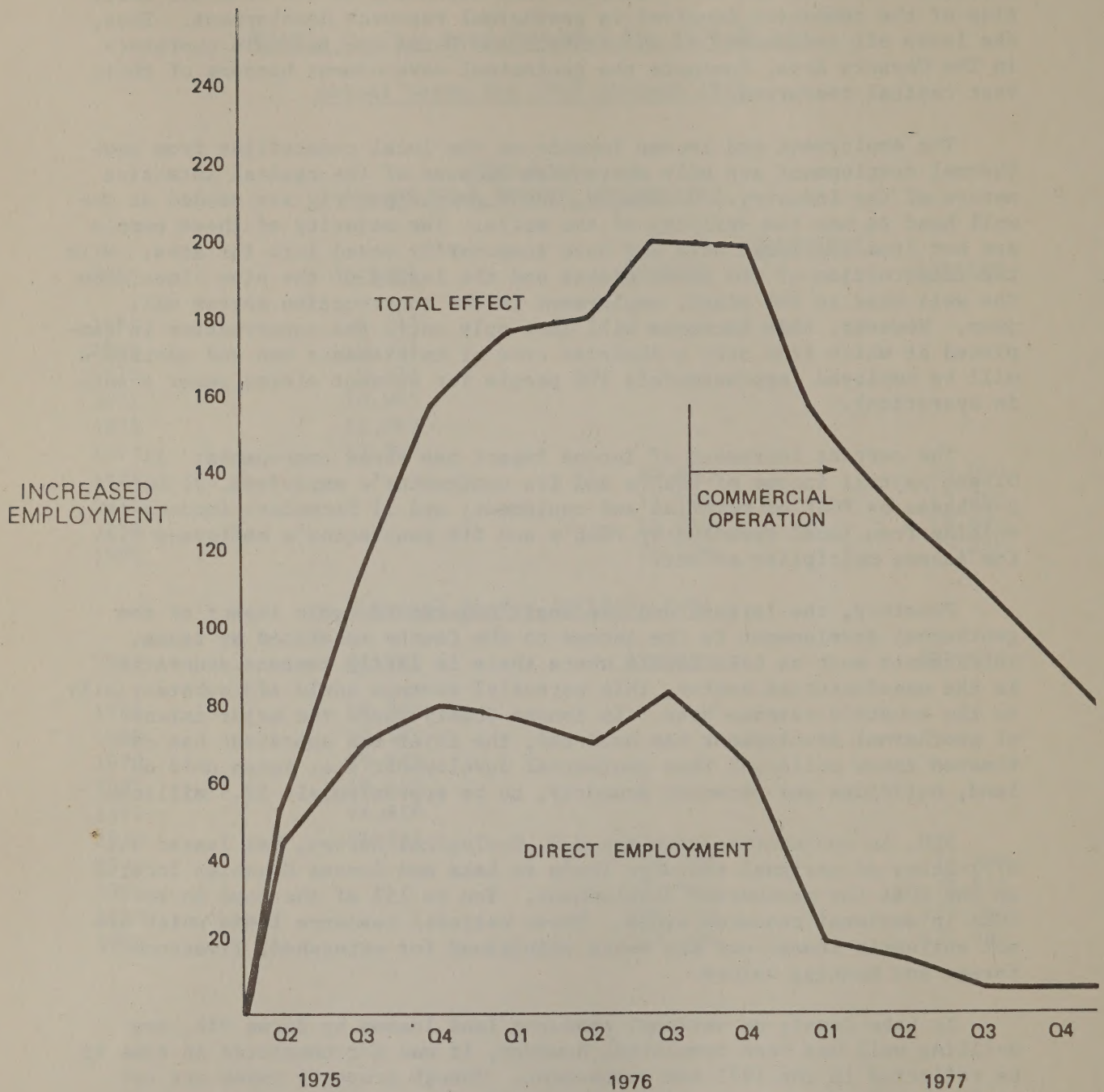
Possibly, the largest and the most long-run economic impact of the geothermal development is the income to the County generated by taxes. In a county such as Lake County where there is little revenue generated in the manufacturing sector, this potential revenue could add substantially to the county's revenue base. In Sonoma County where the major extent of geothermal development has occurred, the chief tax appraiser has estimated taxes collected from geothermal development i.e. taxes paid on land, buildings and personal property, to be approximately \$2.5 million.

BLM, in conjunction with the U.S. Geological Survey, has leased out 8701 acres of national resource lands in Lake and Sonoma Counties located in the KGRA for geothermal development. Ten to 15% of the land in the KGRA is national resource lands. Those national resource lands which are not currently leased out are being maintained for watershed, livestock forage and hunting values.

In Lake County on national resource land leased by Burma Oil, one drilling well has been completed, however, it was not completed in time to be reflected in the 1975 tax assessment. Though property taxes are not paid on national resource lands, leaseholders are subject to possessory interest taxes which are equated to the value of interest held in public lands by an individual or company. BLM leases generated a total of \$67,529 for Lake and Sonoma counties in 1974-75.

With the increased demands for domestic energy sources, geothermal development is now being given more consideration. The U.S. is currently spending \$50 million in research and development of geothermal energy

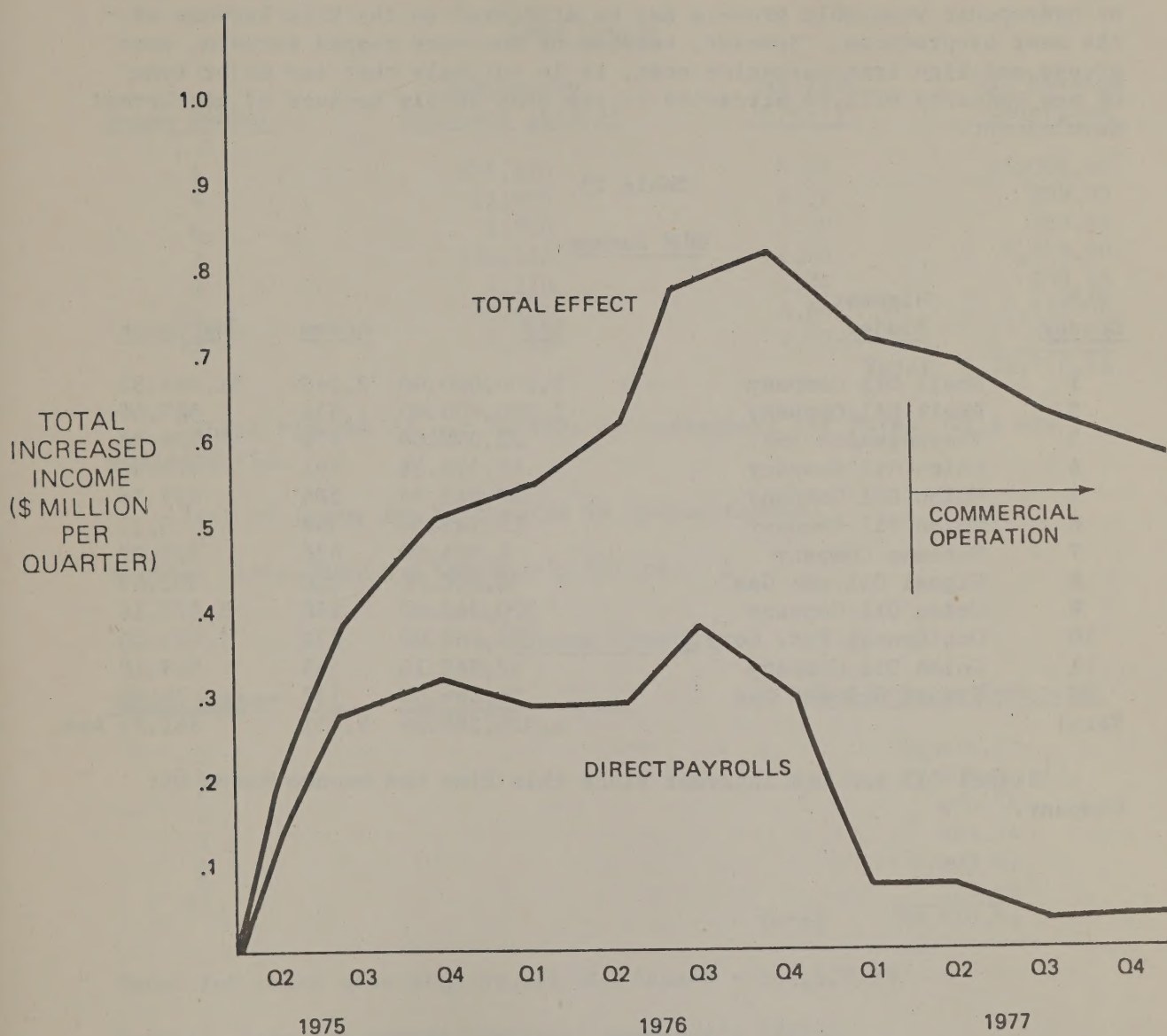
Figure 9



Source: PG&E "Environmental Data Statement for Geysers Unit 13," March, 1974.

Local Employment Resulting from Construction of Unit 13

Figure 10



Source: PG&E "Environmental Data Statement for Geysers Unit 13," March, 1974

Local Wage & Salary Income Resulting from Construction of Unit 13

resources, up from \$2 million in 1971 and \$200,000 in 1968.

Spectulation has been made that fruit drying producers, greenhouses, or hydroponic vegetable growers may be attracted to the KGRA because of the heat by-products. However, because of the very rugged terrain, poor access and high transportation cost, it is unlikely that any major type of new industry will be attracted to the area solely because of geothermal development.

Table 23

BLM Leases

<u>BLM Lease#</u>	<u>Highest Bidder</u>	<u>Bid</u>	<u>Acres</u>	<u>Cost/Acre</u>
1	Shell Oil Company	\$ 3,200,000.00	2,340	\$1,367.52
2	Shell Oil Company	1,300,000.00	1,534	847.46
3	Thermogenics Inc.	22,050.00	175	126.00
4	Union Oil Company	48,314.36	101	478.36
5	Union Oil Company	80,842.84	169	478.36
6	Union Oil Company	12,243.56	2.396	5.11
7	Natomas Company	2,055.00	626	328.27
8	Signal Oil and Gas ¹	75,600.00	250	302.40
9	Union Oil Company	220,342.40	160	1,377.14
10	Occidental Pct. Corp.	226,662.00	222	1,021.00
11	Union Oil Company	22,868.10	45	508.18
12	Signal Oil and Gas	56,666.00	737	76.89
Total		<u>8,320,589.26</u>	<u>8,701</u>	<u>841.25 Ave.</u>

¹Signal Oil and Gas interest since this time has become Burma Oil Company.

Table 24

Tax Revenue Generated From BLM LeasesLake County¹

<u>Lease Number</u>	<u>Possessory Interest 1975-76</u>	<u>Tax Rate 1974-75</u>	<u>Tax Revenue Generated</u>
1	376,610	6.64	25,006.90
5	12,970	6.24	809.33
6	1,920	7.30	140.16
7	136,640	6.64	9,072.90
8	4,570	6.64	303.45
10	27,400	6.64	1,819.36
12	8,010	7.07	566.31
		Total	37,718.41

¹These figures do not include an assessment for Burma Oil's new drilling rig.

Part of lease one is located in Sonoma County.

Source: Lake County's Assessor's Office.

Sonoma County

<u>Lease Number</u>	<u>Tax Revenue Generated</u>
1	13,675.20
2	13,000.00
3	220.50
4	483.14
9	2,203.42
11	228.68
	Total 29,810.94

Total for taxes generated by all BLM leases = \$67,529.35

Source: Lake and Sonoma Counties' Assessor's Office.

RECREATION

The population of California has doubled between 1945 and 1973. The effect of the population increase on outdoor recreation was compounded by an increasing participation rate per capita in outdoor recreation. Increased leisure time, higher family incomes, a greater portion of the population in urban areas, and a younger population age profile all contributed to a higher outdoor recreation rate. Although growth has begun to level off in recent years, recreation participation continues to increase due to increased per capita use.

Federal lands in California account for about one-half of California's 100 million acres. The Forest Service and BLM have recognized the need for multiple-use management of federal lands, but the development of recreational facilities lags far behind the rapid growth in recreation demand.

The Ukiah District consists almost entirely of the North Coast Ranges which extend from the San Francisco Bay to the California-Oregon border and extend inland from the ocean about 80 miles to form the western perimeter of the Sacramento Valley. Recreational resources in the North Coast Ranges include more than 45 public parks, beaches, camp-grounds, and recreation. Humboldt Bay, the Redwoods National Park, Clear Lake, the Russian River, Point Reyes National Seashore, Lake Berryessa, and the northern portion of San Francisco Bay are among the more notable recreation attractions. The wine country, particularly the Napa and Sonoma Valleys, has long been a magnet for tourists.

The outward pressures of urbanization generated by the metropolitan population areas surrounding San Francisco Bay increasingly threaten potential recreation resources along the north coast. Second-home tracts along the Russian River and at Lake Pillsbury, and second-home subdivisions along the coast of Sonoma and Mendocino counties are but two examples of the pervasive nature of these pressures. The expansion and construction of public utility and transportation systems to serve the growing metropolitan populations and the relocation of agricultural production, displaced from prime agricultural land by residential and urban developments, are less obvious but equally important threats.

The efforts of the California Coastal Zone Conservation Commission are focused on the urbanization problem, but the commission's jurisdiction is limited to the coastline and its immediate environments. Stricter zoning and land use regulations are needed throughout the state. County governments, notably those of Marin and Napa counties, are coming to grips with the problem. Such efforts must be expanded and better regional coordination provided since dealing with urbanization on a county-by-county basis has proved to be ineffective.

Planning District 1 of the Department of Parks and Recreation consists of the northern portion of the BLM Ukiah District - Del Norte, Humboldt,

Mendocino, and Lake counties. These counties have a total land area of 9,473 square miles or approximately 6 percent of the state's land area. Only one percent of the state's population resides in this district. Some of the state's major rivers flow within or through these counties. They are the Klamath, Eel, Trinity, Van Duzen, Mad, Mattole, Russian, and Smith rivers and Redwood Creek. Flooding is a major problem along most of these water courses.

Income derived from the provision of recreation-oriented retail trades and services is a significant contributor to the economy of areas adjacent to the major transportation routes (U.S. 101) and those areas that receive a heavy influx of hunters or anglers. Tourism is increasing in importance both economically and as an employer.

Tourists are attracted by a variety of recreational resources, with approximately 29 percent of the area's land available for public recreation use through various federal, state and local recreation agencies. A portion of the 43 percent of the district owned by private corporations (mainly lumber companies) is available to the public for recreational uses on a limited basis.

Over the years, the State of California, in cooperation with the Save-the-Redwoods League, has had a program to complete its redwood parks by including certain additional virgin redwood forests and some adjacent cutover lands. In answer to a nationwide public demand for additional preservation, the Redwood National Park was established by Congress. Lands within the boundary of this park total approximately 58,000 acres, and three state parks containing a total of 27,500 acres are included in this acreage. The Redwood National Park contains approximately 30,000 acres of virgin redwoods, 15 percent of the virgin redwood forest area in California today.

In addition to the large areas of national forest lands which offer opportunities for big game hunting, camping and trout fishing, the 12 state park units provide access to many miles of coastline as well as opportunities for camping, fishing, and beach combing. The ocean salmon fisheries of Fort Bragg, Shelter Cover, Eureka, Trinidad, and Crescent City are popular with fishermen from throughout California and other western states. Fishermen also harvest salmon and steelhead trout during their runs up the major rivers.

A number of tourist attractions are provided by private enterprises in the district. The most notable of these attractions are the several operating steam trains and the famous "Trees of Mystery."

Because of the abundant acreage already in public ownership, the threat of an adverse economic impact on the lumber industry, and the potential loss of tax revenue, residents of many areas within the planning district are openly hostile to the conversion of additional lands to recreational uses. Many local residents resent the intrusion of large numbers of tourists, but at the same time, the economic stimulus provided by the tourist industry is recognized as vital to the local economy.

Table 25

Summary of Public Lands Ownership for Del Norte,Humboldt, Mendocino and Lake Counties

<u>Agency Level</u>	<u>Acres</u>	<u>Percent of Planning District One</u>
Federal	1,604,090	27%
State	161,322	3%
County	20,090	
Cities	4,343	
Other Local	1,738	
Total	1,791,583	30%

Source: Public Land Ownership and Use in California; Senate (California) Fact Finding Committee on Natural Resources, 1965.

Summary of County Deficiency in Local and Regional Park Acreage for Del Norte, Humboldt, Mendocino, and Lake Counties.

<u>Criteria</u>	<u>Local Park</u>	<u>Regional Park</u>
Number of Counties with deficiency	4	3
Deficiency of 1-10%	1	-
Deficiency of 11-20%	-	-
Deficiency of 21-50%	1	1
Greater than 50%	2	2

Source: California Outdoor Recreation Resources Plan, 1974.

For the most part, this district has not been dramatically affected by population growth and the attendant demand for recreation. Most recreation demand is localized, such as at Clear Lake, from the results of pressure from non-residents. Recreation agencies in this planning district are in the enviable position of being able to anticipate and deal with recreation demand before it becomes a problem.

Trying to project recreation and tourism and the income derived there from, is particularly difficult since there is no single sector which clearly encompasses this activity. Dean, Carter, et al., in their study of Humboldt County have attempted this task. They decided that recreation and tourism result in purchases primarily from Input-Output sectors of wholesale and retail trade, hotels and motels, selected services, and entertainment. To arrive at an output figure for recreation and tourism, a visitor-days estimate of 2,000,000 (the current figure is closer to 3,000,000) estimated by the National Park Service was utilized. Since this is a 1964 figure, it is probably biased in a downward direction. The total visitor-days was then disaggregated into its three major components or use types; campers, day-users, and motel and lodge users. Based on the export total for hotels and motels, and using an expenditure per visitor-day for lodging of \$6.50 (\$13.00/night double occupancy) a motel visitor-day total of 630,000 was estimated. Camper use was estimated at 740,000 based on the county overall Economic Development Plan and cross-checked with State Division of Parks and Recreation data. The residual of 630,000 visitor-days was assigned to day users. Using daily expenditure figures (increased 25 percent for inflation) from a study of Tuolumne County (Drake, et al., 1968) a total expenditure for each type of use was estimated. These expenditure totals were then disaggregated into retail purchases, selected services purchases, lodging, and entertainment. Since retail and selected services were importing sectors for the county, the recreation expenditures in this sector were subtracted from the household sector. Estimated tourist retail purchases constituted 11 percent of total household retail purchases and 25 percent of selected services. The above calculations gave the following estimated 1969 expenditures for a recreation and tourist sector.

Retail and Wholesale Trade	\$5.0 mil.
Hotels and Motels	4.1 mil.
Selected Services	0.6
Entertainment	1.2 mil.
Total	\$10.9 mil.

This figure of \$10.9 million can extrapolated and magnified (using the distance from the Bay Area as a function of the magnification) to the other counteis in the Ukiah District for income generated by recreational use.

The southern counties of the Ukiah District, Sonoma, Napa, Solano, and Marin, fall into the sphere of influence created by the San Francisco Bay Area. A large proportion of the growth in recreation demand will

therefore be outside the County's immediate influence. Also, the population growth within the County itself will place increasing pressure on recreation facilities.

The nature of the BLM lands offer the ability to provide for a wide variety of recreational activities. The King Range, Big Butte, and Cache Creek areas complement the four national forest wilderness recreation areas. Besides the traditional recreational uses, some BLM holdings are also potential areas for new types of recreation such as off-road vehicles. Attempting to find direct and indirect benefits and costs of alternative recreational uses is a very elusive task. However, with the overriding increase in demand for recreational area, there is little doubt that any form of recreational area will be used.

Table 26

California State Parks, Reserves, Historical
Monuments, and Recreation Areas Within Ukiah District

<u>Name</u>	<u>County</u>	<u>Area</u>
Total		829,920.53
Admiral William Standley SRA	Mendocino	45.22
Annadel SP	Sonoma	4,525.79
Armstrong Redwoods SR	Sonoma	680.0
Austin Creek SRA	Sonoma	4,235.59
Azalea SR	Humboldt	30.00
Benbow Lake SRA	Humboldt	499.08
Benicia Capitol SHP	Solano	0.96
Benicia SRA	Solano	367.04
Bothe-Napa Valley SP	Napa	1,222.26
Camillus Nelson State Historic Farm	Yolo	100.00
Caspar Headlands SB	Mendocino	2.95
Caspar Headlands SR	Mendocino	2.70
Clear Lake SP	Lake	564.94
Colusa-Sacramento River SRA	Colusa	66.50
Del Norte Coast Redwoods SP	Del Norte	6,375.02
Dry Lagoon SP	Humboldt	1,036.45
Fort Humboldt SHP	Humboldt	11.78
Fort Ross SHP	Sonoma	356.41
Grizzly Creek Redwoods SP	Humboldt	234.25
Hendy Woods SP	Mendocino	604.69
Humboldt Redwoods SP	Humboldt	44,145.17
Jack London SHP	Sonoma	48.21
Jedediah Smith Redwoods SP	Del Norte	9,139.10
Kruse Rhododendron SR	Sonoma	317.00
Little River SB	Humboldt	112.36
MacKerricher SP	Mendocino	880.70
Mailliard Redwoods SR	Mendocino	242.00
Manchester SB	Mendocino	1,211.74
Marin Headlands SP	Marin	659.67
Mendocino Headlands SP	Mendocino	130.85
Montgomery Woods SR	Mendocino	1,142.36
Mt. Tamalpais SP	Marin	6,204.78
Patrick's Point SP	Humboldt	443.18
Paul M. Dimmick WC	Mendocino	11.18
Pelican SB	Del Norte	5.15
Petaluma Adobe SHP	Sonoma	27.71
Prairie Creek Redwoods SP	Del Norte-Humboldt	12,321.05
Reynolds WC	Mendocino	375.00
Richardson Grove SP	Humboldt	815.02
Robert Louis Stevenson SP	Napa	3,203.47
Russian Bulch SP	Mendocino	1,162.00

Table 26 (Cont.)

Salt Point SP	Sonoma	3,173.59
Samuel P. Taylor SP	Marin	2,484.08
Smithe Redwoods SR	Mendocino	462.22
Sonoma Coast SB	Sonoma	1,327.97
Sonoma SHP	Sonoma	62.12
Standish-Hickey SRA	Mendocino	915.43
Stinson SB	Marin	51.22
Sugarloaf Ridge SP	Napa-Sonoma	2,151.71
Tomaes Bay SP	Marin	1,018.08
Trinidad SB	Humboldt	158.67
Van Damme SP	Mendocino	1,909.94
Weaverville Joss House SHP	Trinity	3.23
Westport-union Landing SB	Mendocino	40.95

Data Source Index

<u>Economic Profiles of Individual Counties</u>	<u>Location of Material</u>
1. Economic Profile Statements from individual county Chambers of Commerce	County Chamber of Commerce
2. Materials from Economic Development Office in those counties which had such departments	Economic Development Offices
3. County assessor's Officers	
4. U.S. Census of Population - 1970	Library in Ukiah District Office
5. California Department of Finance - 1975 projections.	Department of Finance
6. BLM, Socio-Economic Data System, 1973	Ukiah District Office Library
7. L.T. Wallace and George Goldman, "Some Examples of the Estimated Economic Impacts on Mendocino County Due to Changes in the Use of the County's Resources," prepared for the Resource Forum and Environmental Quality Coalition, November 24, 1970.	State Office Regional Economist
8. Social and Economic Statistics Administration Bureau of the Census, U.S. Department of Commerce.	U.S. Department of Commerce
9. The Mendocino Coastal Research Group, "The Mendocino Coast - A Vanishing Resource," Western Interstate Commission For Higher Education, 1972.	Western Interstate Commission on Higher Education Library
10. G. Dean, H. Carter, E. Nickerson, R. Adams, "Structure and Projections of the Humboldt County Economy: Economic Growth Versus Environmental Quality," Giannini Foundation Research Report No. 318, July, 1973.	Agricultural Economics Department of U.C. Davis
11. G. Goldman, L.T. Wallace, J. Mamer, "Sonoma County Economic and Resource Use Study," Cooperative Extension, University of California, Berkeley, January, 1973.	State Office Regional Economist
12. I. Hoch and N. Tryphonopoulos, "A Study of the Economy of Napa County, California Agricultural.	Agricultural Economics Department at U.C. Davis

Data Source Index (Cont.)

<u>Economic Profiles of Individual Counties</u>	<u>Location of Material</u>
13. Materials from individual counties Planning Departments.	County Planning Dept.
14. "BLM's Ukiah District Economic Profile Supplement," February, 1974.	Ukiah District Office Library
15. "California Statistical Abstract, 1974," Sacramento, California	Ukiah District Office Library
16. <u>Politics of Land</u> , Project Director Robert C. Fellmeth, the Ralph Nader Task Force Report on Land Use in the State of California, Center for the Study of Responsible Law, Washington, D.C., 1971.	BLM State Office Library 2000
<u>Profiles on Individual Companies</u>	
1. <u>Standard's and Poor's Corporations Index, 1974.</u>	Available in most larger libraries
2. "Standard New York Stock Exchange Reports" obtained from a stock broker at Merrill and Lynch.	Available from most all stock brokers.
3. Individual corporations' annual reports	Obtained from individual corporations.
<u>Forest Products Resources</u>	
1. P. Casamajor, D. Teegarden, J. Zivnuska, "Timber Marketing and Land Ownership in Mendocino County," California Agricultural Experiment Station Bulletin 772, June, 1960.	Forestry Department at U.C. Berkeley
2. Francois Leydet, <u>The Last Redwoods</u> , Sierra Club. Ballantine Books, 1969.	Available at most local libraries
3. Daniel Oswald, "The Timber Resources of Humboldt County," USDA Forest Service Resource Bulletin PNW-26, 1968.	USDA Experimental Station, Humboldt, California
4. _____. "California's Forest Industries - Prospects for the Future," USDA Forest Service Resource Bulletin PNW-35, 1970.	USDA Experimental Station, Humboldt

Data Source Index (Cont.)

<u>Forest Products Resources</u>	<u>Location of Materials</u>
5. _____ . "Timber Resources of Mendocino and Sonoma Counties, California," USDA Forest Service Resource Bulletin PNW-40, 1972.	USDA Experimental Station, Humboldt
6. Materials from the USDA Experimental Station including copy of speech delivered by Paul Smith, Forest Advisor, on "Some Factors Effecting Forest Income in Humboldt County."	USDA Experiment Station Humboldt
7. J. Zivnуска, P. Cox, A. Poli, D. Personen, "The Commercial Forest Resources and Forest Products Industries of California," California, " California Agricultural Extension Service, July, 1965.	Forestry Department of U.C. Berkeley. Also in the Ukiah District library
8. Kenneth Fowler, "Impacts of Projected Timber Harvests in Humboldt County," PhD dissertation in wildland Resource Science, U.C. Berkeley, 1974.	Forestry Department Library at U.C. Berkeley

Geothermal Resources

1. "Environmental Data Statement for Geysers Units 13, 14, and 15," prepared by Pacific Gas and Electric Company, 1974.	Ukiah District Office Library
2. "Environmental Impact Analysis: Shell Oil Company proposed drilling site U.S. Geothermal Two Well #1 Sonoma County, California" by Ecoview Environmental Consultants, September 1, 1974.	Ukiah District Office Library
3. <u>Final Environmental Statement for Geothermal Leasing Program; Vol. I of IV, U.S. Department of the Interior, 1973.</u>	Ukiah District Office Library
4. "An Appraisal of Geothermal Resources in the Mid-Pacific Region; August, 1972;" U.S. Department of the Interior, Bureau of Reclamation.	Ukiah District Office Library

Recreation

1. <u>California Outdoor Recreation Resources Plan; Department of Parks and Recreation, February 1974.</u>	Ukiah District Office Library
--	-------------------------------

Data Source Index (Cont.)

<u>Recreation</u>	<u>Location of Materials</u>
2. <u>Recreation Survey Report 1973</u> : Humboldt County Department of Public Works, Parks and Recreation Division, Conducted by William Peters.	Humboldt County Dept. of Parks and Recreation Also in District Library in Ukiah
3. "Public Lands Outdoor Recreation - Problems and Opportunities" remarks by Burton Sillock Director, BLM; Western Resources Conference Fort Collins, Colorado, July 7, 1972.	Ukiah District Office Library
4. "Park and Recreation Information System, Department of Parks and Recreation," State of California.	Department of Parks and Recreation, State of California

Bureau of Land Management
Library
Bldg. 50, Denver Federal Center
Denver, CO 80225

This intern report was read and accepted by a staff member at:

Agency: Bureau of Land Management - California

Address: 2800 Cottage Way Sacramento, California 95825

This report was completed by a WICHE intern. This intern's project was part of the Resources Development Internship Program administered by the Western Interstate Commission for Higher Education (WICHE).

The purpose of the internship program is to bring organizations involved in community and economic development, environmental problems and the humanities together with institutions of higher education and their students in the West for the benefit of all.

For these organizations, the intern program provides the problem-solving talents of student manpower while making the resources of universities and colleges more available. For institutions of higher education, the program provides relevant field education for their students while building their capacity for problem-solving.

WICHE is an organization in the West uniquely suited for sponsoring such a program. It is an interstate agency formed by the thirteen western states for the specific purpose of relating the resources of higher education to the needs of western citizens. WICHE has been concerned with a broad range of community needs in the West for some time, insofar as they bear directly on the well-being of western peoples and the future of higher education in the West. WICHE feels that the internship program is one method for meeting its obligations within the thirteen western states. In its efforts to achieve these objectives, WICHE appreciates having received the generous support and assistance of the Economic Development Administration; the Jessie Smith Noyes Foundation; the National Endowment for the Humanities; the Wyoming Office of Manpower Planning; and of innumerable local leaders and community organizations, including the agency that sponsored this intern project.

For further information, write Bob Hullinghorst, Director, Resources Development Internship Program, WICHE, P.O. Drawer 'P', Boulder, Colorado 80302 or call (303) 492-7177.

3732-8421451000045700:
1C:1175:WICHE:2H272

**Bureau of Land Management
Library
Denver Service Center**

U.S. DEPARTMENT OF AGRICULTURE
BUREAU OF LAND MANAGEMENT
BORROWER

HC
107 Economic profile of
.C2 Management, Ukiah
L85

DATE LOANED	BORROWER

(Continued on reverse)

Form

